

SUPPLEMENTAL AGREEMENT NO. 2

Contract Number: **SS8180-3/13-3**

Contract Title: **SCADA Process Control System**

Contractor: **Emerson Process Management Power
& Water Solution, Inc.**

**200 Beta Drive
Pittsburgh, PA 15238**

In accordance with the above referenced Contract ("Contract"), this Supplemental Agreement No. 2, when properly executed, becomes a part of the Contract effective upon execution, and sets forth the terms and conditions that are in addition to and/or modify those terms and conditions set forth in the Miami-Dade Contract No. SS8180-3/13-3, SCADA Process Control System by and between Emerson Process Management Power & Water Solutions, Inc. ("Emerson") and Miami-Dade County, a political subdivision of the State of Florida, having its principal office at 111 N.W. 1st Street, Miami, Florida 33128 ("County") and denominated as Contract No. SS8180-3/13-3 (the "Agreement"). In case of any conflict between the Agreement and this Supplemental Agreement No.2, the terms and conditions of this Supplemental Agreement shall control. Except as otherwise modified herein, all terms and conditions of the Agreement shall remain in force and effect.

Whereas the County and Emerson hereby revise and replace in its entirety Exhibit A, "Published List Prices, as attached hereto and incorporated herein. Pricing outlined within Exhibit A shall provide maintenance and support services for the existing System, in addition to any software licenses, parts, components, or professional services that may be required. All pricing outline is effective upon execution by the County and good thru the remainder of the contract term.

All terms, covenants and conditions of the original Contract and any supplemental agreements issued thereto shall remain in full force and effect, except to the extent herein amended.

IN WITNESS WHEREOF, the parties have executed this Supplemental Agreement to County Contract No. SS8180-3/13-3.

Contractor

By: [Signature]

Name: TOM DICK

Title: Vice President

Date: 3/10/15

Attest: [Signature]

Corporate Secretary/Notary

Corporate Seal/Notary

Miami-Dade County

By: [Signature]

Name: Carlos A. Gimenez

Title: Mayor

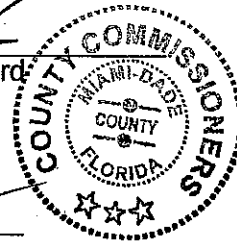
Date: 3/19/15

Attest: [Signature]

Clerk of the Board

Approved as to form
and legal sufficiency

[Signature]
Assistant County Attorney



The following table identifies list price for RTU Emerson Control Wave technical services provided by Emerson Process Management Power & Water Solutions, Inc (Emerson). The list price is current as of January 1, 2013 and is based on a one hour bases during normal business hours (8:00 a.m. to 5:00 p.m.). The rate does not include travel and living expenses, which will be billed at cost plus 10%.

Table 1: Technical Services List Prices

Description	List Price (per hour)
Field Engineer (per hour)	\$223.00
Field Engineer (per hour) Overtime (weekends and Saturday)	\$336.00
Field Engineer (per hour) Overtime (Sundays and Holidays)	\$446.00

Emerson reserves the right to make periodic changes to these list prices and will provide notification in writing of such changes.

ControlWave PAC Base Unit

ControlWave PAC is a high performance RTU/PLC suitable for demanding in-plant measurement and control applications with a high concentration of local I/O. Hot-swap I/O maximizes system up time during maintenance operations and Hold Last maintains safe operating conditions in the event of a CPU failure. Single and Dual-Redundant internal power supply selection allows the proper level of reliability to meet the requirements of the application.



CW

(PC850)

MODEL & SEG	SPEC SHEET	DESCRIPTION	APPROVAL	SELECT	LIST PRICE	CAT.
A		Base Housing		A		
10	CWPAC	None	UL	0	\$0	A
		4 I/O slot panel mount chassis	UL	1	\$410	A
		8 I/O slot 19" rack mount chassis	UL	2	\$682	A
		8 I/O slot panel mount chassis	UL	3	\$682	A
		Internal Power Supply Sequencer Module				
B		(PSSM) (Slot #1)		B		
20	CWPAC	None	UL	0	\$0	A
		24 V input power (CE Approved)				
		Standard PSSM with single power supply	UL	5	\$957	A
		24 V input power (CE Approved)				
		Standard PSSM with dual power supply	UL	6	\$1,431	A
CC		CPU Module (Slot #2) (Note 1) (Note 3)		CC		
30	CWPAC	None		00	\$0	A
		CPU with 64 MB SDRAM, 32 MB of Flash				
		1-ENET & 2-RS 232 (Non CE Approved)	UL	01	\$4,507	A
		CPU with 64 MB SDRAM, 32 MB of Flash				
		1-ENET & 3-RS 232 & 1-RS 485 (Note 2) (Non CE Approved)	UL	02	\$5,531	A
		CPU with 64 MB of Flash, 32 MB of Flash				
		3-ENET & 3-RS 232 & 1-RS 485 (Note 2) (Non CE Approved)	UL	04	\$6,553	A
		CPU with 64 MB of Flash, 32 MB of Flash				
		3-ENET & 2-RS 232 & 2-RS 485 (Note 2) (Non CE Approved)	UL	05	\$6,965	A
		CPU with 64 MB SDRAM, 32 MB of Flash				
		1-ENET & 2-RS 232 (CE Approved)	UL	08	\$4,581	A
		CPU with 64 MB SDRAM, 32 MB of Flash				
		1-ENET & 3-RS 232 & 1-RS 485 (Note 2) (CE Approved)	UL	09	\$5,513	A
		CPU with 64 MB of Flash, 32 MB of Flash				
		3-ENET & 3-RS 232 & 1-RS 485 (Note 2) (CE Approved)	UL	10	\$6,627	A
		CPU with 64 MB of Flash, 32 MB of Flash				
		3-ENET & 2-RS 232 & 2-RS 485 (Note 2) (CE Approved)	UL	11	\$7,039	A
Model Number: CW - A - B - CC - DD - E - FF NN - OO - P Note 1: RS485 Comm port 3 is RJ45. RS 485 ports have 500 V isolation. Note 2: The I/O Expansion Rack CPU interfaces to the main ControlWave Chassis CPU via Ethernet. Note 3: If ordering a spare as a configured item, use the segment and selection code from above. Otherwise, refer to ControlWave PAC spares and Accessories (page 8) for the specific part number.						

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ControlWave PAC Base Unit (Cont.)

CW

(PC850)

MODEL & SEG	SPEC SHEET	DESCRIPTION	APPROVAL	SELECT	LIST PRICE	CAT.
CC		I/O Expansion Rack CPU (Note 3)				
30	CWPAC	Comm CPU, 1-ENET & 2-RS 232 (Non CE Approved)	UL	06	\$1,517	A
		Comm CPU, 3-ENET & 3-RS 232 & 1-RS 485 (Non CE Approved)	UL	07	\$3,338	A
		Comm CPU, 1-ENET & 2-RS 232 (CE Approved)	UL	12	\$1,591	A
		Comm CPU, 3-ENET & 3-RS 232 & 1-RS 485 (CE Approved)	UL	13	\$3,412	A
DD		Embedded Application		DD		
39	CWPAC	None	UL	0	\$0	A
E		CE Approval		E		
40	CWPAC	Without CE approval	UL	0	\$0	A
		CE foil shield and labels	UL/CE	1	\$0	A
FF-NN		I/O Slot #3, through #10 (Note 1)		FF-NN		
50-120	CWPAC	Local Termination I/O Modules				
		None - Blank panel provided for empty slot	UL	00	\$0	A
		16 AI, 4-20 mA Internally or Externally powered AI	UL	01	\$2,014	A
		8 AI, 4-20 mA Internally or Externally powered AI	UL	03	\$1,537	A
		6 TC, B, R, S, J, E, K, T, C, N, + 10 mV	UL	05	\$1,564	A
		4 RTD, 2, 3, or 4 wire platinum RTD	UL	06	\$1,439	A
		8 AO, Without read back 4-20 mA	UL	07	\$2,253	A
		32 DI, Selectable Int or Ext powered Dry Contact	UL	09	\$888	A
		16 DI, Selectable Int or Ext powered Dry Contact	UL	10	\$800	A
		32 DO, Open Drain - 500 mA current capability	UL	11	\$951	A
		16 DO Without read back,				
		Open Drain - 500 mA current capability	UL	12	\$820	A
		6 UDI (HighSpeed Counter),				
		With selectable debounce @ (0-10 KHz) for low or High speed counters. Inputs 24 VDC only.	UL	14	\$820	A
		Remote Termination I/O Modules with Remote Terminal Blocks (No Fuses)				
		16 AI, 4-20 mA Internally or Externally powered AI	N/A	20	\$2,202	A
		8 AI, 4-20 mA Internally or Externally powered AI	N/A	22	\$1,632	A
		16 AI (Used with Redundant I/O system),				
		1-5 V & ext. powered 4-20 (with 250 ohm on input)	N/A	23	\$1,732	A
		6 TC, B, R, S, J, E, K, T, C, N, + 10 mV	N/A	24	\$1,702	A
		4 RTD, 2, 3, or 4 wire platinum RTD	N/A	25	\$1,513	A
		8 AO, without read back 4-20 mA	N/A	26	\$2,439	A
		8 AO, with read back for Redundant I/O 4-20 mA	N/A	34	\$3,388	A
		32 DI, Selectable Int or Ext powered Dry Contact+	N/A	28	\$1,145	A
		32 DO, Open Drain - 500 mA current capability (Note 2)	N/A	30	\$1,208	A
		16 DO without read back,				
		Open Drain - 500 mA current capability (Note 2)	N/A	31	\$948	A
		16 DO with read back for Redundant I/O,				
		Open Drain - 500 mA current capability (Note 2)	N/A	35	\$2,071	A
		6 UDI (HighSpeed Counter),				
		With selectable debounce @ (0-10 KHz) for low or High speed counters. Inputs 24 VDC only.	N/A	33	\$913	A

Note 1: Blank I/O slot Plates are now supplied for unused slots.

Note 2: 3A maximum per 8 channel Remote Terminal Block.

Note 3: If ordering a spare as a configured item, use the segment and selection code from above. Otherwise, refer to ControlWave PAC spares and Accessories (page 8) for the specific part number.

ControlWave PAC Base Unit (Cont.)

CW

(PC850)

MODEL & SEG	SPEC SHEET	DESCRIPTION	APPROVAL	SELECT	LIST PRICE	CAT.
FF-NN		I/O Slot #3 through #10		FF-NN		
50-120		Remote Termination I/O Modules with Remote Terminal Blocks (With Fuses)				
	CWPAC	16 AI, 20 mA Internally or Externally powered AI	N/A	40	\$2,262	A
		8 AI, 4-20 mA Internally or Externally powered AI	N/A	42	\$1,662	A
		16 AI (Used with Redundant I/O system), 1-5 V & ext. powered 4-20 (with 250 ohm on input)	N/A	43	\$1,715	A
		8 AO without read back, 4-20 mA	N/A	44	\$2,500	A
		8 AO with read back, 4-20 mA (Use with Redundant I/O only)	N/A	60	\$3,447	A
		32 DI, Selectable Int or Ext powered Dry Contact	N/A	46	\$1,391	A
		16 DI, Selectable Int or Ext powered Dry Contact	N/A	47	\$1,051	A
		32 DO, Open Drain - 500 mA current capability (Note 1)	N/A	48	\$1,417	A
		16 DO, Open Drain - 500 mA current capability (Note 1)	N/A	49	\$1,053	A
		16 DO with read back, Open Drain - (Use with Redundant I/O only) (Note 1)	N/A	61	\$2,176	A
		32 DI With 120 Vac Remote Terminal Block (NO FUSES)	N/A	70	\$1,707	A
		32 DO With 120 Vac Block, 6Amp RELAY (NO FUSES)	N/A	71	\$1,698	A
			Remote Termination I/O Module spares without Remote Terminal Blocks			
50-120	CWPAC	16 AI, 20 mA Internally or Externally powered AI	N/A	72	\$2,014	A
		8 AI, 4-20 mA Internally or Externally powered AI	N/A	73	\$1,632	A
		16 AI (Used with Redundant I/O system), 1-5 V & ext. powered 4-20 (with 250 ohm on input)	N/A	74	\$2,303	A
		6 TC, B, R, S, J, E, K, T, C, N, + 10mV	N/A	75	\$1,702	A
		4 RTD, 2, 3, or 4, wire platinum RTD	N/A	76	\$1,513	A
		8 AO without read back, 4-20 mA	N/A	77	\$2,253	A
		32 DI, Selectable Int or Ext powered Dry Contact	N/A	78	\$888	A
		16 DI, Selectable Int or Ext powered Dry Contact	N/A	79	\$800	A
		32 DO, Open Drain - 500 mA current capability	N/A	80	\$951	A
		16 DO, Open Drain - 500 mA current capability	N/A	81	\$820	A
		6 UDI (HighSpeed Counter), With selectable debounce @ (0-10 KHz) for low or High speed counters. Inputs 24 VDC only.	N/A	82	\$820	A
		8 AO with read back, 4-20 mA (Use with Redundant I/O only)	N/A	83	\$3,111	A
		16 DO with read back for Redundant I/O, Open Drain - 500 mA current capability	N/A	84	\$1,943	A
	Note 1: 3A maximum per 8 channel Remote Terminal Block.					

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ControlWave PAC Base Unit (Cont.)

CW

(PC850)

MODEL & SEG	SPEC SHEET	DESCRIPTION	APPROVAL	SELECT	LIST PRICE	CAT.
OO		Remote Terminal Cable Selection		OO		
130	CWPAC	Number of ControlWave Micro Remote I/O Modules				
		None	N/A	00	\$0	A
		1 Remote I/O Module	N/A	01	\$184	A
		2 Remote I/O Module	N/A	02	\$366	A
		3 Remote I/O Module	N/A	03	\$549	A
		4 Remote I/O Module	N/A	04	\$732	A
		5 Remote I/O Module	N/A	05	\$914	A
		6 Remote I/O Module	N/A	06	\$1,098	A
		7 Remote I/O Module	N/A	07	\$1,281	A
		8 Remote I/O Module	N/A	08	\$1,463	A
P		Remote Termination Length Selection		P		
190	CWPAC	None	N/A	0	\$0	A
		18 inch Cable	N/A	1	\$0	A
		39 inch Cable	N/A	2	\$0	A
		6.5 foot Cable	N/A	3	\$0	A
		13 foot Cable	N/A	4	\$0	A

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ControlWave Control & Communication Redundancy

The ControlWave redundant process control and communication system provides dual CPUs, dual power supplies, dual communication paths, and automatic switching between redundant components without any data loss.



It contains two CPUs: a primary CPU and a backup CPU. In the event of a primary CPU failure, the system automatically switches to the backup CPU. All process control and communication functions automatically switch to the backup CPU. A Dual-Redundant internal power supply option is available for even higher system reliability.

CWREDCPU		(PC 850)				
MODEL & SEG	SPEC SHEET	DESCRIPTION	APPROVAL	SELECT	LIST PRICE	CAT.
A		Internal Power Supply Sequencer Module (Note 2)		A		
10		PSSM - 24V Single Power Supply module (CE Approved)	UL	3	\$1,911	A
		PSSM - 24V Dual Power Supply module (CE Approved)	UL	4	\$2,858	A
BC		Dual Redundant CPUs / Comm Port Configurations		BC		
20		CPU / (2) RS 232, (1) Ethernet	UL	1	\$9,012	A
		CPU / (2) RS 232, (2) RS-485, (3) Ethernet	UL	12	\$13,927	A
D		Chassis & Switcher Assembly		D		
30		With Cables, Rack Mount (2) RS-232, (2) RS-485 (Standard)	UL	1	\$2,917	A
		With Cables, Panel Mount (2) RS-232, (2) RS-485 (Standard)	UL	2	\$3,005	A
		With Cables, Rack Mount (2) RS-232, (2) RS-485 Extended Switchover	UL	3	\$2,917	A
		With Cables, Panel Mount (2) RS-232, (2) RS-485 Extended Switchover	UL	4	\$3,005	A
E		Conformal Coating				
40		With conformal coating	UL	1	\$0	A
Model Number: CWREDCPU- A - B C - D - E Note 1: Redundant unit includes: Chassis, 2-PSSM, 2-CPU, Redundancy Switch Panel and serial communication cables from the CPUs to the Switch Panel. I/O is located in the Expansion Rack. Note 2: CE Approved refers to EMC Emissions and Immunity. Refer to spec sheets for complete list of approvals.						

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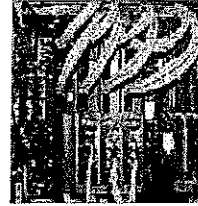
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ControlWave PAC Redundant I/O System

The ControlWave redundant I/O system provides the highest level of system reliability. The system includes two identical ControlWave PAC units, with identical I/O and an I/O switch panel providing automatic switching between the two ControlWave units to provide redundant control, communication and I/O without any data loss. Analog and Digital outputs with unique read back circuitry ensure the backup system I/O is capable of assuming reliable control in the event of a primary on-line system failure.



CWREDIO

(PC 850)

MODEL & SEG	SPEC SHEET	DESCRIPTION		APPROVAL	SELECT	LIST PRICE	CAT.
A		Chassis, PS & CPU Switcher Assembly (Note 1) (NOT C1, D2)			A		
10	CWPAC:RDN	None	Select for I/O switch spares	UL	0	\$0	A
		Switch Assy	(2) RS232 & (2) RS485 ports (Standard)	UL	3	\$5,347	A
		Switch Assy	(2) RS232 & (2) RS485 ports (Extend Switchover)	UL	4	\$5,347	A
BC - PQ		I/O Switcher (Slot 1 - 8) (Note 2 & 3)			BC - PQ		
20 - 90	CWPAC:RDN	None	Empty Slot	UL	00	\$0	A
		None	Empty slot with blank	UL	20	\$17	A
		Local Terminations	Includes cables from I/O module to switcher				
	CWPAC:RDN	Digital Input	Internally or Externally	UL	01	\$2,511	A
		Analog Input	4-20 mA input (Note 4)	UL	02	\$3,011	A
		Digital Output		UL	04	\$2,511	A
		Analog Output	4-20 mA	UL	05	\$2,745	A
		Analog Output With Read back	4-20 mA	UL	12	\$2,745	A
		Digital Output With Read back		UL	15	\$2,511	A
		Remote Terminations	Includes cables from I/O module to switcher				
	CWPAC:RDN	Digital Input	Internally or Externally	UL	06	\$2,511	A
		Analog Input	4-20 mA input (Note 4)	UL	07	\$3,011	A
		Digital Output		UL	09	\$2,511	A
		Analog Output	4-20 mA	UL	10	\$2,745	A
		Analog Output With Read back		UL	14	\$2,745	A
		Digital Output With Read back		UL	13	\$2,511	A
R		Conformal Coating					
100		With Conformal		UL	1	\$0	A

Model Number: CWREDIO - A - B C - D E - F G - H I - J K - L M - N O - P Q

Redundant unit includes: Chassis, 2-PSSM, Redundancy Switch Panel and serial communication cables from the CPUs to the Switch Panel.

Note 1: Only 8 slot base chassis are supported. Do not use 4 slot ControlWave chassis with I/O redundant systems.

Note 2: Use ONLY Remote Termination I/O modules in the ControlWave base controllers and I/O Expansion Racks.

Note 3: All I/O switchers support the double density I/O modules.

Note 4: Select 1 - 5V AI modules when ordering ControlWave I/O modules. Even the 4 - 20mA switch modules use 1 - 5V AI modules in the base controller chassis. Only the 4 - 20 mA inputs are externally sourced.

The AI modules in the ControlWave chassis must be a 1 - 5 V input modules for either the 1 - 5 V or 4 - 20 mA switchers. This means that field inputs can be either 1 - 5 V or 4 - 20 mA external sourced inputs, however the redundant switcher always provides a 1 - 5 V signal to the I/O card in the ControlWave Chassis.

ControlWave PAC Parts & Accessories

(PC 854)

DESCRIPTION		PART NO.	LIST PRICE	CAT.
Spare Parts				
Terminal Housing	Blue door assembly	396282-01-6	\$25	D1
Termination Block	Local Term	396286-01-1	\$98	D1
Termination Block	Remote DI	396381-01-4	\$98	D1
Termination Block	Remote DO	396381-02-2	\$98	D1
Termination Block	Remote AI/AO	396381-03-0	\$81	D1
Termination Block	Remote UDI	396381-04-9	\$98	D1
Door Labels				
16 AI Label		396364-01-2	\$1	D1
8 AI Label		396377-01-7	\$1	D1
8 AO Label		396364-02-0	\$1	D1
4 AO Label		396377-02-5	\$1	D1
32 DI Label		396364-03-9	\$1	D1
16 DI Label		396377-03-3	\$1	D1
32 DO Label		396364-04-7	\$1	D1
16 DO Label		396377-04-1	\$1	D1
12 UDI Label		396364-05-5	\$1	D1
6 UDI Label		396377-05-0	\$1	D1
Redundancy				
Chassis	Panel mount	396483-01-1	\$769	D1
Switcher	2 - RS 232 & 2 - RS 485 comm ports	396484-02-6	\$2,698	D1
Switcher ribbon cable	2 required	396487-01-7	\$144	D1
Red. Comm. Cable	2 - RS 232 & 2 - RS 485 ports	396978-01-0	\$742	D1
Miscellaneous				
Battery		395600-01-4	\$17	D1
Battery holder		395601-01-0	\$3	D1
CPU Key		395602-02-7	\$4	D1
250 ohm resistor	250 ohm (.01% , 1/4 w) (PC 863)	374664-01-3	\$23	D1
Comm Cable	PC to ControlWave cable	392843-01-3	\$98	D1
I/O Blank Panel	I/O slot cover panel	396379-01-0	\$25	D1
Redundant I/O Blank Panel	I/O switcher blank panel	396498-03-5	\$96	D1
RJ-45 Adapter	RJ-45 to 9-pin D connector	392844-01-0	\$75	D1
Remote Termination Relay	6 Amp relay for remote termination.	V2961105	\$10	D1
Remote Termination Fuse	1/8 Amp I/O point fuse for Phoenix remote term.	391707-04-3	\$5	D1
Remote Termination Fuse	1 Amp DO I/O point fuse for Phoenix remote term.	391707-06-0	\$5	D1
Remote Termination Fuse	2 Amp DI & DO module fuse for Phoenix remote term.	391707-05-1	\$5	D1
RTD sensor	TC cold junction compensation local & remote term	400128-01-2	\$45	D1

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ControlWave PAC Spares & Accessories (Cont.)

(PC 854/493)

DESCRIPTION		PART NO.	LIST PRICE	CAT.
CE Approval Kits (PC 854)				
CPU port configuration model (Note 1)				
	1 - ENET & 2 - RS 232	396359019-CE-Kit	\$22	D1
	1 - ENET & 3 - RS 232 & 1 - RS 485	396359060-CE-Kit	\$22	D1
	1 - ENET & 2 - RS 232 & 2 - RS 485	396359078-CE-Kit	\$22	D1
	3 - ENET & 3 - RS 232 & 1 - RS 485	396359051-CE-Kit	\$22	D1
	3 - ENET & 2 - RS 232 & 2 - RS 485	396359124-CE-Kit	\$22	D1
CPU Modules				
Non CE Approved				
01	1 - ENET & 2 - RS 232	396359-21-3	\$4,436	A
02	1 - ENET & 3 - RS 232 & 1 - RS 485	396359-26-4	\$5,444	A
04	3 - ENET & 3 - RS 232 & 1 - RS 485	396359-25-6	\$6,450	A
05	3 - ENET & 2 - RS 232 & 2 - RS 485	396359-32-9	\$6,855	A
06	1 - ENET & 2 - RS 232	396458-17-3	\$1,493	A
07	3 - ENET & 3 - RS 232 & 1 - RS 485	396458-18-1	\$3,285	A
CE Approved				
08	1 - ENET & 2 - RS232 (396359-21-3 + 396359019-CE-KIT)	CWCPU08	\$4,509	A
09	1 - ENET & 3 - RS232 & 1 RS485 (396359-26-4 + 396359060-CE-KIT)	CWCPU09	\$5,517	A
10	3 - ENET & 3 - RS232 & 1 RS485 (396359-25-6 + 396359051-CE-KIT)	CWCPU10	\$6,523	A
11	3 - ENET & 2 - RS232 & 2 RS485 (396359-32-9 + 396359124-CE-KIT)	CWCPU11	\$6,928	A
12	CE Comm CPU & 1 - ENET & 2 - RS232 (396458-17-3 + 396359019-CE-KIT)	CWCPU12	\$1,566	A
13	CE Comm CPU & 3 - ENET & 3 - RS232 & 1 RS485 (396458-18-1 + 396359124-CE-KIT)	CWCPU13	\$3,358	A
C - Series - Not Class 1, Div 2, Screw terminals				
24 V, 5 A (120 VAC)	DIN rail (-25 to 70 deg. C) Not Class 1, Div 2	398036-00-4	\$262	D1
Power Supply/ Charger (Not C1, D2)	Use with VCS5.241 or VCS10241 (Replaces Converter Concepts SYS-30009)			
12 V & 24 V, (24 Vdc Input)	DIN rail (-25 to 70 deg. C)	398036-01-2	\$724	D1
Note1: CPU CE Kit includes CE Foil shield, labels and instructions.				

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ControlWave PAC Spares & Accessories (Cont.)

(PC 492)

DESCRIPTION		PART NO.	LIST PRICE	CAT.
Communication Port Devices (PC 493)				
HART Device Interface (HDI)	Serial to FSK HART interface (PC 878)	392930-01-3	\$810	A
Digi Edgeport1	USB to Serial Adapter (Requires serial RTU Comm Cable)	V301-1001-15	\$184	D1
Phoenix Terminal Server	RS232 to Ethernet Conv. (0 to 55 deg. C)	V2744490	\$623	D1
Phoenix RS485 Surge Protector		397155-00-0	\$141	D1
IG202T PLM (Note 1)	1200 baud 202T standalone modem 100-240VAC, 10 - 48V DC	VIG202T	\$1,127	D1
IG202T-DC (Note 1)	1200 baud 202T standalone modem 10 - 48V DC	VIG202T-DC	\$1,095	D1
IG202T DIN mount kit	IG202T DIN Rail mounting kit	VIG202T-DIN	\$73	D1
Industrial Switches (PC 493)				
4-Port Industrial Switch	4 port 10/100 Base-T switch + uplink (Replaces BB-GT-5ES-1)	VSLX-5ES-1	\$307	D1
8-Port Industrial Switch	7 port 10/100 Base-T switch + uplink (Replaces BB-GT-9ES-1)	VSLX-8ES-1	\$384	D1
4-Port Fiber Switch (Note 1)	1-multimode ST & 4-RJ45 (Replaces BB-GT-5ES-2ST)	VSLX-5ES-2ST	\$438	D1
Maple Systems (PC 492)				
LCD Displays				
OIT 3175-A00 - 16 Key	4 Line X 20 Character 0-50 deg. C	395631-02-5	\$563	D1
OIT 3185-A00 - 24 Key	4 Line X 20 Character 0-50 deg. C	395631-03-3	\$593	D1
VFD Displays - All are Class 1, Div 2				
OIT 4175A-A00 - 16 Key	4 Line X 20 Char -10 to +65 deg. C	395631-08-4	\$863	D1
OIT 4185A-A00 - 24 Key	4 Line X 20 Char -10 to +65 deg. C	395631-09-2	\$899	D1
Cables				
OIT - Configuration & Comm.	PC & ControlWave to OIT (Note 2)	395632-01-3	\$68	D1
OIT - 33XX Comm cable	33XX to OIT only	395633-01-0	\$75	D1
Color Touch Screen Displays				
HMI 5056N (Ethernet port)	5.6" color display, touch screen	VHMI5056N	\$825	D1
HMI 5070 TH (Ethernet port)	7" color display, touch screen	VHMI5070TH	\$1,035	D1
HMI 5104 TH (Ethernet port)	10" color display, touch screen	VHMI5104TH	\$2,535	D1
HMI 5121 X (Ethernet port)	12" color display, touch screen	VHMI5121X	\$2,685	D1
HMI Cables				
HMI Config Cable	PC to Maple (Note 3)	V74310098	\$68	D1
HMI to CW Comm Cable	Maple To ControlWave comm cable (RS232)	V744601245	\$75	D1
Configuration Software CD (Note 4)				
OIT Series display	Required to develop OIT LCD displays	395634-01-6	\$112	D1
HMI Series display	Required to develop HMI displays	VEZWARE	\$112	D1
Note 1: Requires a 9 - pin serial modem cable. Note 2: This cable is required for programming and communication. Note 3: Required for programming & downloading to Maple. Note 4: One CD required for programming any number of displays.				

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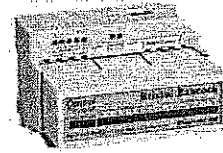
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ControlWave Ethernet I/O

The compact DIN-rail mount ControlWave Ethernet I/O modules provide open connectivity through 10 Mbps and 38.4 KB serial RS 485. The wide range of module I/O configuration brings exceptional flexibility to network diversity. Each module is designed and rated for harsh industrial environments. And UL Approvals for CLASS1, Div. 2 HAZARDOUS INSTALLATIONS.



DESCRIPTION		PART NO.	LIST PRICE	CAT.
Ethernet I/O Modules				
16 AI (4-20 mA)		BB-16AI2-H	\$1,272	D1
8 AI/4 AO		BB-8AI2-4AO2-H	\$1,272	D1
16 DI		BB-16DI2-H	\$724	D1
16 DO		BB-16DO2-H	\$797	D1
8 DI/8 DO		BB-8DI2-8DO2-H	\$797	D1
8 AI/8 DI		BB-8DI2-8AI2-H	\$951	D1
8 CNT, Up to 50 KHz		BB-8CNT-U	\$935	D1
8 Thermocouple / Instrumentation AI		BB-8INS-U	\$1,369	D1
4RTD/4 DI		BB-4RTD-4DI2-U	\$1,369	D1
Accessories				
Setup Module		BB-232-SETUP	\$306	D1
Software				
I/O Configuration Tools	Included on the Bristol Software CD		\$0	D1
Note 1: The spares and replacement modules are not available. Please order the entire Ethernet module.				

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ControlWave Micro

ControlWave Micro is a high performance RTU/PLC ideally suited for remote area installations in harsh environments. It offers very low power consumption, a wide operating temperature range and compact footprint. The wide variety of flexible modular I/O and up to 11 serial and two Ethernet communication ports make ControlWave Micro extremely adaptable to virtually any in-plant or remote measurement and control application.



CWM

(PC 853)

MODEL & SEG	SPEC SHEET	DESCRIPTION	APPROVAL	SELECT	LIST PRICE	CAT.
A		Base Housing (Note 4)		A		
10	420DS-5L	None	UL	0	\$0	A
		3 slot panel mount base PSSM, CPU & 1 slot for I/O, No Comm Exp	UL	1	\$399	A
		4 slot panel mount base PSSM, CPU & 2 slots for Exp Comm or I/O	UL/ATEX	2	\$444	A
		8 slot panel mount base PSSM, CPU, 2 slots for Exp Comm or I/O and 4 slots dedicated to I/O modules	UL/ATEX	3	\$519	A
B		I/O Expansion Base (Note 4)		B		
20	420DS-5L	None	UL	0	\$0	A
		2 I/O slot panel mount exp base, Up to 2 I/O modules	UL	1	\$371	A
		4 I/O slot panel mount exp base, Up to 4 I/O modules	UL	2	\$409	A
		8 I/O slot panel mount exp base, Up to 8 I/O modules	UL	3	\$484	A
CC		CPU Module (Slot #2) (Note 2) (Note 6)		CC		
30	420DS-5L	None	UL	00	\$0	A
		Micro 33 CPU With Gas Calcs				
	420DS-5L	33MHz CPU/2M SR,64M SDR,16M Flash 0 - ENET & 2 - RS 232, & 1 RS 485 (Non CE Approved)	UL	01	\$1,349	A
	420DS-5L	33MHz CPU/2M SR,64M SDR,16M Flash 0 - ENET & 2 - RS 232, & 1 RS 485 (CE Approved) (Note 5)	UL	11	\$1,397	A
		Micro 33 CPU Without Gas Calcs				
	420DS-5L	33MHz CPU/2M SR,64M SDR,16M Flash 0 - ENET & 2 - RS 232, & 1 RS 485 (Non CE Approved)	UL	02	\$1,092	A
	420DS-5L	33MHz CPU/2M SR,64M SDR,16M Flash 0 - ENET & 2 - RS 232, & 1 RS 485 (CE Approved) (Note 5)	UL	12	\$1,140	A
		Micro 150 CPU With Gas Calcs				
	420DS-5L	150MHzCPU/2M SR, 64M SDR, 16M Flash 0 - ENET & 2 - RS 232 & 1 RS 485 (Non CE Approved)	UL	04	\$1,346	A
		150MHzCPU/1M SR, 64M SDR, 16M Flash 1 - ENET & 2 - RS 232 & 1 RS 485 (Non CE Approved)	UL/ATEX	05	\$1,752	A
		150MHzCPU/2M SR, 64M SDR, 16M Flash 2 - ENET & 1 - RS 232 & 1 RS 485 (Non CE Approved)	UL	06	\$2,085	A

Model Number: CWM - A - B - CC - DD - E - F - G - HH - JJ - KK - LL - MM - NN - OO - PP - QQ - RR - SS - TT - UU - VV - WW - X

Note 1: One I/O Expansion Base allowed with 12-24 V System Controller. Up to 6 I/O modules maximum with 6-12VSC.

Note 2: 6-18V System Controller I/O Limit - Up to 6 I/O modules maximum (2 isolated I/O modules maximum).

Note 3: RS 485 port is non-isolated.

Note 4: Unused I/O slots 3-14 of configured ControlWave Micro model include blank I/O module fronts.

Note 5: CE Approved refers to EMC Emissions and Immunity. Refer to spec sheets for complete list of approvals.

Note 6: If ordering a spare as a configured item, use the segment and selection code from above. Otherwise, refer to ControlWave Micro spares and Accessories (page 24) for the specific part number.

ControlWave Micro (Cont.)

CWM

(PC 853)

MODEL & SEG	SPEC SHEET	DESCRIPTION	APPROVAL	SELECT	LIST PRICE	CAT.
30	420DS-5L	Micro 150 CPU With Gas Calcs (Note 6)				
		150MHzCPU/2M SR, 64M SDR, 16M Flash 0 - ENET & 2 - RS 232 & 1 RS 485 (CE Approved) (Note 5)	UL	14	\$1,395	A
		150MHzCPU/1M SR, 64M SDR, 16M Flash 1 - ENET & 2 - RS 232 & 1 RS 485 (CE Approved) (Note 5)	UL/ATEX	15	\$1,800	A
		150MHzCPU/2M SR, 64M SDR, 16M Flash 2 - ENET & 1 - RS 232 & 1 RS 485 (CE Approved) (Note 5)	UL	16	\$2,133	A
		Micro 150 CPU Without Gas Calcs				
		150MHzCPU/2M SR, 64M SDR, 16M Flash 1 - ENET & 2 - RS 232 & 1 RS 485 (Non CE Approved)	UL/ATEX	07	\$1,397	A
	420DS-5L	150MHzCPU/2M SR, 64M SDR, 16M Flash 2 - ENET & 1 - RS 232 & 1 RS 485 (Non CE Approved)	UL	08	\$1,728	A
		150MHzCPU/2M SR, 64M SDR, 16M Flash 1 - ENET & 2 - RS 232 & 1 RS 485 (CE Approved) (Note 5)	UL/ATEX	17	\$1,445	A
		150MHzCPU/2M SR, 64M SDR, 16M Flash 2 - ENET & 1 - RS 232 & 1 RS 485 (CE Approved) (Note 5)	UL	18	\$1,776	A
	420DS-5L	Micro Distributed I/O Expansion CPU				
		Comm CPU 1 - ENET & 2 - RS 232, & 1 RS 485	UL	09	\$957	A
	420DS-5L	Comm CPU 1 - ENET & 2 - RS 232, & 1 RS 485 (CE Approved)	UL	19	\$1,005	A
DD		Embedded Application		DD		
39	CWMICRO-SM	None	UL	00	\$0	A
		Station Manager Version 3.02 Application (Note 4)	UL	01	\$1,534	A
		Station Manager XT Version 3.02 Application (Note 4)	UL	02	\$1,534	A
		Station Manager 6-Run Application (Note 4)	UL	03	\$1,534	A
		Station Manager 8-Run Application (Note 4)	UL	04	\$1,534	A
		Station Manager XT 8-Run Application (Note 4)	UL	05	\$1,534	A
E		Internal Power Supply Module (Slot#1) (Note 1)		E		
40	420DS-5L	None	UL	0	\$0	A
		6 - 18 V input power System Controller with display interface, with wet-end interface (Non CE Approved)	UL	1	\$578	A
		12 - 24 V Syst. Cont., w/o key lock & WD with display interface, no wet-end interface (Non CE Approved)	UL/ATEX	2	\$578	A
		12 - 24 V Syst. Cont., with key lock & WD with display interface, no wet-end interface (Non CE Approved)	UL	3	\$760	A
		6 - 18 V input power System Controller with display interface, with wet-end interface (CE Approved)	UL	4	\$578	A
		12 - 24 V Syst. Cont., w/o key lock & WD with display interface, no wet-end interface (CE Approved)	UL/ATEX	5	\$578	A
		12 - 24 V Syst. Cont., with key lock & WD with display interface, no wet-end interface (CE Approved)	UL	6	\$760	A

Note 1: 6-18V System Controller I/O Limit - Up to 6 I/O modules maximum (2 isolated I/O modules maximum).
Note 2: NA
Note 3: Blank I/O slot cover are supplied for unused slots in configured model.
Note 4: Station Manager Application suitable for U.S. Market Only.
 Station Manager XT Version requires CWXFC Firmware 1.59 or CWGFC Firmware 2.29 or greater for external measurement.
Note 5: CE Approved refers to EMC Emissions and Immunity. Refer to spec sheets for complete list of approvals.
Note 6: If ordering a spare as a configured item, use the segment and selection code from above. Otherwise, refer to ControlWave Micro spares and Accessories (page 24) for the specific part number.

ControlWave Micro (Cont.)

CWM

(PC 853)

MODEL & SEG	SPEC SHEET	DESCRIPTION	APPROVAL	SELECT	LIST PRICE	CAT.
F		Approval		F		
45	420DS-5L	Without CE approval	UL	0	\$0	A
		CE approval; CE foil shield and labels	UL/CE	1	\$0	A
G		Display (Keypad buttons)		G		
50	420DS-5L	None	UL	0	\$0	A
		Display - 4 line X 20 character				
		2 buttons. Also includes 2' display cable	UL	1	\$444	A
		Display/Keypad - 4 line X 20 character				
		25 button keypad. Also includes 2' cable	UL	2	\$623	A
HH & JJ		I/O & COMM Slot #3 & #4 (Note 3)		HH & JJ		
		Comm Expansion Module				
60 & 70	420DS-5L	None - Blank panel provided for empty slot	UL	00	\$0	A
		2 Port Comm module, isolated RS 485				
		1 - RS232 & 1 - Isolated RS 485	UL	01	\$918	A
		2 Port Comm module Dial-line modem,				
		1 - RS232 & 1 - Isolated RS 485 (Note 4) (For CE Approval)	UL	04	\$1,651	A
		4 Port Comm				
		2 - RS232, 2 - isolated RS 485	UL/ATEX	05	\$1,086	A
		2 Port Comm module, isolated RS 485				
		1 - RS232 & 1 - Isolated RS 485 (For CE Approval)	UL	75	\$918	A
		2 Port Comm module Dial-line modem,				
		1 - RS232 & 1 - Isolated RS 485 (Note 4) (For CE Approval)	UL	76	\$1,651	A
		4 Port Comm				
		2 - RS232, 2 - isolated RS 485 (For CE Approval)	UL/ATEX	77	\$1,086	A

Note 1: 6-18V System Controller I/O Limit - Up to 6 I/O modules maximum (2 isolated I/O modules maximum).

Note 2: NA

Note 3: Blank I/O slot cover are supplied for unused slots in configured model.

Note 4: CE Approved refers to EMC Emissions and Immunity.

Refer to spec sheets for complete list of approvals.

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ControlWave Micro (Cont.)

CWM

(PC 853)

MODEL & SEG	SPEC SHEET	DESCRIPTION	APPROVAL	SELECT	LIST PRICE	CAT		
HH & JJ		I/O & COMM Slot #3 & #4		HH & JJ				
60 & 70	420DS-5L	Local Termination I/O Modules						
		Mixed 12 DI, 4 DO with LEDs Non-Isolated internally sourced dry contact	UL	06	\$519	A		
		Isolated, Mixed 12 DI, 4 DO with LEDs Isolated, Int. or Ext. sourced dry contact	UL	07	\$634	A		
		16 DI with LEDs (24 VDC Input) Isolated, Int. or Ext. sourced dry contact	UL	08	\$585	A		
		16 DI with LEDs (12 VDC Input), Ext. sourced	UL	09	\$634	A		
		8 DI with LEDs (120 - 240 VAC Input) Isolated externally sourced voltage input	UL/ATEX	10	\$510	A		
		16 DO with LEDs; 1/2 Amp Open source output	UL	11	\$510	A		
		8 DO with LEDs (120 - 240 VAC Output) (Note 1)						
		6A Relay @ 120 VAC externally sourced	N/A	12	\$651	A		
		6 AI (Note 2) Externally sourced 1-5 V or 4-20 mA	UL	13	\$706	A		
		Mixed 6 AI, 2 AO (Note 2) Externally sourced 1-5 V or 4-20 mA	UL	14	\$931	A		
		Isolated AI, 8 inputs (180V CM), Int or Ext sourced 1-5 V or 4-20 mA	UL	15	\$1,298	A		
		6 TC, B, R, S, J, E, K, T, C, N, \pm 10.mV	UL	16	\$1,207	A		
		4 RTD, 2, 3, or 4 wire platinum RTD	UL	17	\$1,207	A		
		Isolated AO, 4 outputs Int or Ext sourced 1-5 V or 4-20 mA	UL	18	\$1,022	A		
		4 HSC with LEDs, Hi / Low Speed Counters	UL	19	\$547	A		
		8 HART/BTI (Note 3) HART, BTI, AI, AO. Int/Ext sourced AIs	UL	20	\$2,048	A		
		Mixed 6 DIO, 4 AI, 2 HSC with LEDS Dry contact DI, Ext. sourced 1-5V or 4-20mA	UL	21	\$883	A		
		Mixed 6 DIO, 4 AI, 2 HSC, 1 AO with LEDS Dry contact DI, Ext. sourced 1-5V or 4-20mA	UL/ATEX	22	\$1,030	A		
		Note 1: 8 Point 120VAC DI & DO Card cannot be used in the first slot of the I/O Expansion Chassis. 120VAC DI & DO modules are not class 1, Div 2 approved.						
		Note 2: The externally sourced AIs on the mixed I/O cards require external wiring for the 24V device power. Terminal block connections for distributed field power are provided on the I/O card for AOs only.						
		Note 3: Not supported in I/O Expansion chassis. Pass-through to AMS not supported. Maximum of two HART modules may be installed in a ControlWave Micro chassis, with 6 - 18V Internal Power Supply module. Order additional HART/BTI modules as spares when using 24V Power Supply module.						

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ControlWave Micro (Cont.)

CWM

(PC 853)

MODEL & SEG	SPEC SHEET	DESCRIPTION	APPROVAL	SELECT	LIST PRICE	CAT.
HH & JJ		I/O & COMM Slot #3 & #4		HH & JJ		
60 & 70		Remote Termination I/O Modules with Remote Terminal Blocks (No Fuses)				
	420DS-5L	Mixed 12 DI, 4 DO with LEDs				
		Non-Isolated internally sourced dry contact	N/A	23	\$698	A
		16 DI with LEDs				
		Isolated, Int. or Ext. sourced dry contact	N/A	24	\$763	A
		16 DO with LEDs, .5 Amp Open source output (Note 2)	N/A	25	\$670	A
		6 AI (Note 1), Externally sourced 1-5 V or 4-20 mA	N/A	26	\$651	A
		Mixed 6 AI, 2 AO				
		Externally sourced 1-5 V or 4-20 mA	N/A	27	\$1,059	A
		Isolated AI, 8 inputs (180 V CM), Int or Ext sourced 1-5 V or 4-20 mA	N/A	28	\$1,427	A
		6 TC, B, R, S, J, E, K, T, C, N, ± 10 mV	N/A	29	\$1,337	A
		4 RTD, 2, 3, or 4 wire platinum RTD	N/A	30	\$1,337	A
		Isolated AO, 4 outputs				
		Int or Ext sourced 1-5 V or 4-20 mA	N/A	31	\$1,152	A
		4 HSC with LEDs, Hi / Low Speed Counters	N/A	32	\$678	A
		8 HART/BTI				
		HART, BTI, AI, AO. Int/Ext sourced AIs (Note 1)	N/A	33	\$2,179	A
		Remote Termination I/O Modules with Remote Terminal Blocks (With Fuses)				
	420DS-5L	16 DI with LEDs				
		Isolated, Int. or Ext. sourced dry contact	N/A	37	\$936	A
		16 DO with LEDs, .5 Amp Open source output (Note 2)	N/A	38	\$834	A
		6 AI Externally sourced 1-5 V or 4-20 mA	N/A	39	\$878	A
		Mixed 6 AI, 2 AO (Note 1)				
		Externally sourced 1-5 V or 4-20 mA	N/A	40	\$1,101	A
		Isolated AI, 8 inputs (180 V CM), Int or Ext sourced 1-5 V or 4-20 mA	N/A	41	\$1,469	A
		Isolated AO, 4 outputs				
		Int or Ext sourced 1-5 V or 4-20 mA	N/A	44	\$1,193	A
		8 HART/BTI (Note 1)				
		HART, BTI, AI, AO. Int/Ext sourced AIs	N/A	46	\$2,220	A
		Mixed 6 DIO, 4 AI, 2 HSC, With LEDs				
		Dry contact DI, Ext. sourced 1-5V or 4-20 mA	N/A	47	\$1,494	A
		Mixed 6 DIO, 4 AI, 2 HSC, 1 AO, With LEDs				
		Dry contact DI, Ext. sourced 1-5V or 4-20 mA	N/A	48	\$1,642	A
		16 DI With 120VAC Remote Terminal Block (NO FUSES)	N/A	60	\$1,154	A
		16 DO With 120VAC Remote Terminal Block				
		6Amp RELAY (NO FUSES)	N/A	61	\$1,027	A

Note 1: Not supported in I/O Expansion chassis. Pass-through to AMS not supported. Maximum of two HART modules may be installed in a ControlWave Micro chassis, with 6 - 18V Internal Power Supply module. Order additional HART/BTI modules as spares when using 24V Power Supply module.

Note 2: 3A maximum per 8 channel remote terminal block.

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ControlWave Micro (Cont.)

CWM

(PC 853)

MODEL & SEG	SPEC SHEET	DESCRIPTION	APPROVAL	SELECT	LIST PRICE	CAT.	
HH & JJ		Remote Termination I/O Module Spares without Remote Terminal Blocks					
60 & 70	420DS-5L	Mixed 12 DI, 4 DO with LEDs Non-Isolated internally sourced dry contact	N/A	62	\$519	A	
		16 DI with LEDs Isolated, Int. or Ext. sourced dry contact	N/A	63	\$585	A	
		16 DO with LEDs, .5 Amp Open source output	N/A	64	\$510	A	
		6 AI (Note 1), Externally sourced 1-5 V or 4-20 mA	N/A	65	\$706	A	
		Mixed 6 AI, 2 AO (Note 1) Externally sourced 1-5 V or 4-20 mA	N/A	66	\$932	A	
		Isolated AI, 8 inputs (180 V CM), Int or Ext sourced 1-5 V or 4-20 mA	N/A	67	\$1,299	A	
		6 TC, B, R, S, J, E, K, T, C, N, ± 10 mV	N/A	68	\$1,207	A	
		4 RTD, 2, 3, or 4 wire platinum RTD	N/A	69	\$1,207	A	
		Isolated AO, 4 outputs Int or Ext sourced 1-5 V or 4-20 mA	N/A	70	\$1,022	A	
		4 HSC with LEDs, Hi / Low Speed Counters	N/A	71	\$547	A	
		8 HART/BTI (Note 2) HART, BTI, AI, AO, Int/Ext sourced AIs	N/A	72	\$2,048	A	
		Mixed 6 DIO, 4 AI, 2 HSC, With LEDS Dry contact DI, Ext. sourced 1-5V or 4-20 mA	N/A	73	\$883	A	
		Mixed 6 DIO, 4 AI, 2 HSC, 1 AO, With LEDS Dry contact DI, Ext. sourced 1-5V or 4-20 mA	N/A	74	\$1,030	A	
		Note 1: The externally sourced AIs on the mixed I/O cards require external wiring for the 24V device power. Terminal block connections for the field power are provided on the I/O card for AOs only.					
		Note 2: Not supported in I/O Expansion chassis. Pass-through to AMS not supported. Maximum of two HART modules may be installed in a ControlWave Micro chassis.					

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ControlWave Micro (Cont.)

CWM

(PC 853)

MODEL & SEG	SPEC SHEET	DESCRIPTION	APPROVAL	SELECT	LIST PRICE	CAT.	
KK & LL		I/O Slot #5 & #6		KK & LL			
80 & 90	420DS-5L	None - Blank panel provided for empty slot	N/A	00	\$0	A	
		Local Termination I/O Modules					
	420DS-5L	Mixed 12 DI, 4 DO with LEDs					
		Non-Isolated internally sourced dry contact	UL	06	\$519	A	
		Isolated, Mixed 12 DI, 4 DO with LEDs					
		Isolated, Int. or Ext. sourced dry contact	UL	07	\$634	A	
		16 DI with LEDs (24 VDC Input)					
		Isolated, Int. or Ext. sourced dry contact	UL	08	\$585	A	
		16 DI with LEDs (12 VDC Input), Ext. sourced	UL	09	\$634	A	
		8 DI with LEDs (120 - 240 VAC Input)					
		Isolated externally sourced voltage input	UL/ATEX	10	\$510	A	
		16 DO with LEDs, 1/2 Amp Open source output	UL	11	\$510	A	
		8 DO with LEDs (120 - 240 VAC Output)					
		6A Relay @ 120 VAC externally sourced (Note 1)	N/A	12	\$651	A	
		6 AI, Externally sourced 1-5 V or 4-20 mA (Note 2)	UL	13	\$706	A	
		Mixed 6 AI, 2 AO					
		Externally sourced 1-5 V or 4-20 mA (Note 2)	UL	14	\$931	A	
		Isolated AI, 8 inputs (180 V CM)					
		Int or Ext sourced 1-5 V or 4-20 mA	UL	15	\$1,298	A	
		6 TC, B, R, S, J, E, K, T, C, N ± 10 mV	UL	16	\$1,207	A	
		4 RTD, 2, 3, or 4 wire platinum RTD	UL	17	\$1,207	A	
		Isolated AO, 4 outputs					
		Int or Ext sourced 1-5 V or 4-20 mA	UL	18	\$1,022	A	
	4 HSC with LEDs, Hi / Low Speed Counters	UL	19	\$547	A		
	8 HART/BTI						
	HART, BTI, AI, AO. Int/Ext sourced AIs (Note 3)	UL	20	\$2,048	A		
	Mixed 6 DIO, 4 AI, 2 HSC, with LEDS						
Dry contact DI, Ext. sourced 1-5V or 4-20mA	UL	21	\$883	A			
Mixed 6 DIO, 4 AI, 2 HSC, 1 AO, with LEDS							
Dry contact DI, Ext. sourced 1-5V or 4-20mA	UL/ATEX	22	\$1,030	A			
Note 1: 8 Point 120VAC DI & DO Card cannot be used in the first slot of the I/O Expansion Chassis. 120VAC DI & DO modules are not class 1, Div 2 approved.							
Note 2: The externally sourced AIs on the mixed I/O cards require external wiring for the 24V device power. Terminal block connections for the field power are provided on the I/O card for AOs only.							
Note 3: Not supported in I/O Expansion chassis. Pass-through to AMS not supported. Maximum of two HART modules may be installed in a ControlWave Micro chassis.							

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ControlWave Micro (Cont.)

CWM

(PC 853)

MODEL & SEG	SPEC SHEET	DESCRIPTION	APPROVAL	SELECT	LIST PRICE	CAT.	
KK & LL		I/O Slot #5 & #6		KK & LL			
80 & 90		Remote Termination I/O Modules with Remote Terminal Blocks (No Fuses)					
	420DS-5L	Mixed 12 DI, 4 DO with LEDs					
		Non-Isolated internally sourced dry contact	N/A	23	\$698	A	
		16 DI with LEDs, Isolated, Int. or Ext. sourced dry contact	N/A	24	\$763	A	
		16 DO with LEDs, .5 Amp Open source output (Note 3)	N/A	25	\$670	A	
		6 AI, Externally sourced 1-5 V or 4-20 mA (Note 1)	N/A	26	\$651	A	
		Mixed 6 AI, 2 AO					
		Externally sourced 1-5 V or 4-20 mA (Note 1)	N/A	27	\$1,059	A	
		Isolated AI, 8 inputs (180 V CM), Int or Ext sourced 1-5 V or 4-20 mA	N/A	28	\$1,427	A	
		6 TC; B, R, S, J, E, K, T, C, N, ± 10 mV	N/A	29	\$1,337	A	
		4 RTD; 2, 3, or 4 wire platinum RTD	N/A	30	\$1,337	A	
		Isolated AO, 4 outputs					
		Int or Ext sourced 1-5 V or 4-20 mA	N/A	31	\$1,152	A	
		4 HSC with LEDs, Hi / Low Speed Counters	N/A	32	\$678	A	
		8 HART/BTI HART, BTI, AI, AO. Int/Ext sourced AIs (Note 2)	N/A	33	\$2,179	A	
		Remote Termination I/O Modules with Remote Terminal Blocks (With Fuses)					
	420DS-5L	16 DI with LEDs, Isolated, Int. or Ext. sourced dry contact	N/A	37	\$936	A	
		16 DO with LEDs, .5 Amp Open source output (Note 3)	N/A	38	\$834	A	
		6 AI, Externally sourced 1-5 V or 4-20 mA (Note 1)	N/A	39	\$878	A	
		Mixed 6 AI, 2 AO					
		Externally sourced 1-5 V or 4-20 mA (Note 1)	N/A	40	\$1,101	A	
		Isolated AI, 8 inputs (180 V CM), Int or Ext sourced 1-5 V or 4-20 mA	N/A	41	\$1,469	A	
		Isolated AO, 4 outputs					
		Int or Ext sourced 1-5 V or 4-20 mA	N/A	44	\$1,193	A	
		8 HART/BTI HART, BTI, AI, AO. Int/Ext sourced AIs (Note 2)	N/A	46	\$2,220	A	
		Mixed 6 DIO, 4 AI, 2 HSC, With LEDs					
		Dry contact DI, Ext. sourced 1-5V or 4-20 mA	N/A	47	\$1,494	A	
		Mixed 6 DIO, 4 AI, 2 HSC, 1 AO, With LEDs					
		Dry contact DI, Ext. sourced 1-5V or 4-20 mA	N/A	48	\$1,642	A	
		16 DI With 120VAC Remote Terminal Block (NO FUSES)	N/A	60	\$1,154	A	
		16 DO With 120VAC Remote Terminal Block 6Amp RELAY (NO FUSES)	N/A	61	\$1,027	A	
Note 1: The externally sourced AIs on the mixed I/O cards require external wiring for the 24V device power. Terminal block connections for the field power are provided on the I/O card for AOs only.							
Note 2: Not supported in I/O Expansion chassis. Pass-through to AMS not supported. Maximum of two HART modules may be installed in a ControlWave Micro chassis.							
Note 3: 3A maximum per 8 channel remote terminal block.							

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ControlWave Micro (Cont.)

CWM

(PC 853)

MODEL & SEG	SPEC SHEET	DESCRIPTION	APPROVAL	SELECT	LIST PRICE	CAT.
MM - VV		COM & I/O Slot #7 through #16		MM - VV		
100 - 170 175 - 178	420DS-5L	None	N/A	00	\$0	A
		Local Termination I/O Modules				
	420DS-5L	Mixed 12 DI, 4 DO with LEDs Non-Isolated internally sourced dry contact	UL	06	\$519	A
		Isolated, Mixed 12 DI, 4 DO with LEDs Isolated, Int. or Ext. sourced dry contact	UL	07	\$634	A
		16 DI with LEDs (24 VDC Input) Isolated, Int. or Ext. sourced dry contact	UL	08	\$585	A
		16 DI with LEDs (12 VDC Input), Ext. sourced	UL	09	\$634	A
		8 DI with LEDs (120 - 240 VAC Input) Isolated externally sourced voltage input	UL/ATEX	10	\$510	A
		16 DO with LEDs, 1/2 Amp Open source output	UL	11	\$510	A
		8 DO with LEDs (120-240 VAC Output)				
		6A Relay @ 120 VAC externally sourced (Note 1)	UL	12	\$651	A
		6 AI, Externally sourced 1-5 V or 4-20 mA (Note 2)	UL	13	\$706	A
		Mixed 6 AI, 2 AO				
		Externally sourced 1-5 V or 4-20 mA (Note 2)	UL	14	\$931	A
		Isolated AI, 8 inputs (180 V CM)				
		Int or Ext sourced 1-5 V or 4-20 mA	UL	15	\$1,298	A
		6 TC, B, R, S, J, E, K, T, C, N, \pm 10 mV	UL	16	\$1,207	A
		4 RTD, 2, 3, or 4 wire platinum RTD	UL	17	\$1,207	A
		Isolated AO, 4 outputs				
		Int or Ext sourced 1-5 V or 4-20 mA	UL	18	\$1,022	A
		4 HSC with LEDs, Hi / Low Speed Counters	UL	19	\$547	A
		Mixed 6 DIO, 4 AI, 2 HSC, with LEDS				
		Dry contact DI, Ext. sourced 1-5V or 4-20mA	UL	21	\$883	A
		Mixed 6 DIO, 4 AI, 2 HSC, 1 AO, with LEDS				
		Dry contact DI, Ext. sourced 1-5V or 4-20mA	UL/ATEX	22	\$1,030	A
Note 1: 8 Point 120VAC DI & DO Card cannot be used in the first slot of the I/O Expansion Chassis. 120VAC DI & DO modules are not class 1, Div 2 approved.						
Note 2: The externally sourced AIs on the mixed I/O cards require external wiring for the 24V device power. Terminal block connections for the field power are provided on the I/O card for AOs only.						

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ControlWave Micro (Cont.)

CWM

(PC 853)

MODEL & SEG	SPEC SHEET	DESCRIPTION	APPROVAL	SELECT	LIST PRICE	CAT.
MM - VV		COM & I/O Slot #7 through #16		MM - VV		
		Remote Termination I/O Modules with Remote Terminal Blocks (No Fuses)				
	420DS-5L	Mixed 12 DI, 4 DO with LEDs Non-Isolated internally sourced dry contact	N/A	23	\$698	A
		16 DI with LEDs, Isolated, Int. or Ext. sourced dry contact	N/A	24	\$763	A
		16 DO with LEDs, .5 Amp Open source output (Note 2)	N/A	25	\$670	A
		6 AI, Externally sourced 1-5 V or 4-20 mA (Note 1)	N/A	26	\$651	A
		Mixed 6 AI, 2 AO				
		Externally sourced 1-5 V or 4-20 mA (Note 1)	N/A	27	\$1,059	A
		Isolated AI, 8 inputs (180 V CM), Int or Ext sourced 1-5 V or 4-20 mA	N/A	28	\$1,427	A
		6 TC, B, R, S, J, E, K, T, C, N, \pm 10 mV	N/A	29	\$1,337	A
		4 RTD, 2, 3, or 4 wire platinum RTD	N/A	30	\$1,337	A
		Isolated AO, 4 outputs				
		Int or Ext sourced 1-5 V or 4-20 mA	N/A	31	\$1,152	A
		4 HSC with LEDs, Hi / Low Speed Counters	N/A	32	\$678	A
100 - 170 175 - 178		Remote Termination I/O Modules with Remote Terminal Blocks (With Fuses)				
		16 DI with LEDs, Isolated, Int. or Ext. sourced dry contact	N/A	37	\$936	A
		16 DO with LEDs, .5 Amp Open source output (Note 2)	N/A	38	\$834	A
		6 AI, Externally sourced 1-5 V or 4-20 mA (Note 1)	N/A	39	\$878	A
		Mixed 6 AI, 2 AO				
		Externally sourced 1-5 V or 4-20 mA (Note 1)	N/A	40	\$1,101	A
		Isolated AI, 8 inputs (180 V CM), Int or Ext sourced 1-5 V or 4-20 mA	N/A	41	\$1,469	A
		Isolated AO, 4 outputs				
		Int or Ext sourced 1-5 V or 4-20 mA	N/A	44	\$1,193	A
	420DS-5L	Mixed 6 DIO, 4 AI, 2 HSC, With LEDS				
		Dry contact DI, Ext. sourced 1-5V or 4-20 mA	N/A	47	\$1,494	A
		Mixed 6 DIO, 4 AI, 2 HSC, 1 AO, With LEDS				
		Dry contact DI, Ext. sourced 1-5V or 4-20 mA	N/A	48	\$1,642	A
		16 DI With 120VAC Remote Terminal Block (NO FUSES)	N/A	60	\$1,154	A
		16 DO With 120VAC Remote Terminal Block 6Amp RELAY (NO FUSES)	N/A	61	\$1,027	A

Note 1: The externally sourced AIs on the mixed I/O cards require external wiring for the 24V device power. Terminal block connections for the field power are provided on the I/O card for AOs only.

Note 2: 3A maximum per 8 channel remote terminal block.

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ControlWave Micro (Cont.)

CWM

(PC 853)

MODEL & SEG	SPEC SHEET	DESCRIPTION	APPROVAL	SELECT	LIST PRICE	CAT.
WW		Remote Terminal Cable Selection		WW		
		Number of ControlWave Micro Remote I/O Modules				
180	420DS-5L	None	N/A	00	\$0	A
		1 Remote I/O Module	N/A	01	\$127	A
		2 Remote I/O Module	N/A	02	\$254	A
		3 Remote I/O Module	N/A	03	\$380	A
		4 Remote I/O Module	N/A	04	\$508	A
		5 Remote I/O Module	N/A	05	\$636	A
		6 Remote I/O Module	N/A	06	\$763	A
		7 Remote I/O Module	N/A	07	\$890	A
		8 Remote I/O Module	N/A	08	\$1,018	A
		9 Remote I/O Module	N/A	09	\$1,144	A
		10 Remote I/O Module	N/A	10	\$1,271	A
		11 Remote I/O Module	N/A	11	\$1,399	A
		12 Remote I/O Module	N/A	12	\$1,526	A
		13 Remote I/O Module	N/A	13	\$1,652	A
		14 Remote I/O Module	N/A	14	\$1,781	A
X		Remote Termination Length Selection		X		
190	420DS-5L	None	N/A	0	\$0	A
		18 inch Cable	N/A	1	\$0	A
		39 inch Cable	N/A	2	\$0	A
		6.5 foot Cable	N/A	3	\$0	A
		13 foot Cable	N/A	4	\$0	A

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ControlWave PAC ControlWave Micro Parts and Accessories

(PC 851)

DESCRIPTION			PART NO.	LIST PRICE	CAT.
ControlWave PAC & Micro Remote Terminal Blocks (NOT C1, D2) (Note 1 & 3) (replacement fuses & relays can be found on parts page)					
(PC 851)					
Terminal Block	ControlWave PAC ControlWave Micro				
4 point AI (No Fuse)	8 & 6 channel AI	6 & 8 channel AI, Mixed 6AI/2AO			
4 point RTD (No Fuse)	4 channel RTD	4 channel RTD			
2 point AO (No Fuse)	4 & 8 channel AO	4 channel AO			
2 point HSC (No Fuse)	4 channel UDI	4 channel HSC	396391-01-0	\$62	D1
4 point AI (Fused)	8 & 16 channel AI	6 & 8 channel AI, Mixed 6AI/2AO			
2 point AO (Fuses)			396391-02-8	\$83	D1
8 point TC input block	6 channel TC	6 channel TC	396885-01-2	\$144	D1
8 point DI (No Fuse)	16 & 32 channel DI	8 & 16 channel DI, Mixed 12DI/4DO			
8 point DO (No Fuse) (Note 4)	16 & 32 channel DO	8 channel DO	396292-01-6	\$86	D1
8 point DI (Fused)	16 & 32 channel DI	16 channel DI	395622-02-6	\$169	D1
8 point DI - 120Vac (No Fuse)	8 & 16 ch DI (Int. pwr)	16 channel DI	395622-04-2	\$274	D1
8 point DO (Fused) (Note 4)	16 & 32 channel DO	16 channel DO	395622-03-4	\$158	D1
8 point 6A Relay DO (No Fuse)	16 & 32 channel DO	16 channel DO	395622-00-0	\$253	D1
16 point Mixed I/O (Fused)	NA	Mixed 6 DIO/4 AI/1 AO	400131-02-1	\$618	D1
Remote Terminal Blocks cables (1 cable required for each terminal block; 2 cables for Mix I/O terminal blocks) (PC 851)					
18" Term Cable			396389-04-0	\$46	D1
39" Term Cable			396389-01-5	\$48	D1
6.5 ft. Term Cable			396389-02-3	\$57	D1
13 ft. Term Cable			396389-03-1	\$70	D1
CE Approval Retrofit Kits (PC 854)					
CPU without Ethernet	CE foil shield and labels		621538027-Kit	\$22	D1
CPU with Ethernet	CE foil shield and labels		621538019-Kit	\$22	D1
PSSM module	CE foil shield and labels		621538043-Kit	\$22	D1
Comm Expansion Module	CE foil shield and labels		621538035-Kit	\$22	D1
Note 1: Shield termination connection for AI & AO Remote Terminal blocks recommend (P/N 395722-01-2 \$9) AO requires one and the AI requires two.					
Note 2: The fuses do not provide protection for HSC points.					
Note 3: Phoenix Remote Terminations are not approved for Class 1, Div 2 installations.					
Note 4: Max 3A per 8 Channel Terminal Block					

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ControlWave Micro Spares and Accessories (Cont.)

(PC 854)

DESCRIPTION		PART NO.	LIST PRICE	CAT.
Spare Parts & Miscellaneous Accessories (PC 493 & 854)				
DIN Rail Mounting Adapter	Fits 2, 3 and 4 slot chassis	396856-01-2	\$126	D1
DIN Rail Mounting Adapter	Fits 8 slot chassis	396856-02-0	\$200	D1
Loop Supply	DIN Rail mount 24V Loop Supply	721708-02-1	\$560	A
I/O module wire way cover	Covers 2 I/O modules	396546-01-3	\$15	D1
LED board	16 LEDs for DIO, DI, DO and HSC modules	400042-01-0	\$65	D1
Blank I/O module front		396545-01-7	\$12	D1
Termination Block	PSSM 3-pin for power	391718-10-0	\$15	D1
Termination Block label	Label for 3-pin power terminal block above	396592-00-7	\$1	D1
Termination Block	PSSM 2-pin for watchdog	391718-09-6	\$15	D1
Termination Block	10-pin terminal block (All I/O modules)	391718-03-7	\$27	D1
Remote Termination Relay	6 Amp Relay for remote termination.	V2961105	\$10	D1
Remote Termination Fuse	1/8 Amp I/O point fuse for Phoenix remote termination.	391707-04-3	\$5	D1
Remote Termination Fuse	1 Amp DO I/O point fuse for Phoenix remote termination.	391707-06-0	\$5	D1
Remote Termination Fuse	2 Amp DI & DO module fuse for Phoenix remote termination.	391707-05-1	\$5	D1
Remote Termination Fuse	1/8 Amp I/O point fuse for MIO 400131-02-1	395735-01-7	\$5	D1
Remote Termination Fuse	1/4 Amp fuse for MIO 400131-02-1	395736-01-3	\$5	D1
RTD sensor	TC cold junction compensation for local termination	400127-01-6	\$41	D1
RTD sensor	TC cold junction compensation for remote termination module	400128-01-2	\$45	D1
Jumper plug		389193-01-1	\$1	D1
Battery (BR2330)	Use with clip type holder	395620-01-5	\$24	D1
Battery (CR2032)	Use with snap type holder	W15020X0012	\$24	D1
Fuse		391196-12-0	\$3	D1
Dial-Line Modem Kit	Replacement Kit	396582-03-6	\$740	D1
Note 1: Shield termination connection for AI & AO Remote Terminal blocks recommend (P/N 395722-01-2 \$9) AO requires one and the AI requires two.				
Note 2: The fuses do not provide protection for HSC points.				

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ControlWave Micro Spares and Accessories (Cont.)

(PC 854)

DESCRIPTION		PART NO.	LIST PRICE	CAT.
CPU Modules				
Non CE Approved				
01	33 MHz, 2 RS232, 1 RS485, 64 MB SDRAM, 16 MB Flash	396563-19-8	\$1,308	A
02	33 MHz, 2 RS232, 1 RS485, 64 MB SDRAM, 16 MB Flash	396563-19-8S	\$1,059	A
04	150 MHz, 2 RS232, 1 RS485, 64 MB SDRAM, 16 MB Flash	396563-15-5	\$1,306	A
05	150 MHz, 2 RS232, 1 RS485, 64 MB SDRAM, 16 MB Flash	396563-16-3	\$1,699	A
06	150 MHz, 1 RS232, 1 RS485, 64 MB SDRAM, 16 MB Flash	396879-11-0	\$2,022	A
07	150 MHz, 2 RS232, 1 RS485, 64 MB SDRAM, 16 MB Flash	396563-16-3S	\$1,355	A
08	150 MHz, 1 RS232, 1 RS485, 64 MB SDRAM, 16 MB Flash	396879-11-0S	\$1,676	A
09	1 ENET, 1 RS232, 1 RS485	396563-18-0	\$928	A
CE Approved				
11	33 MHz, 2 RS232, 1 RS485, 64 MB SDRAM, 16 MB Flash (621538-02-7 + 396563-19-8)	396563198-CE	\$1,355	A
12	33 MHz, 2 RS232, 1 RS485, 64 MB SDRAM, 16 MB Flash (621538-02-7 + 396563-19-8S)	396563198S-CE	\$1,106	A
14	150 MHz, 2 RS232, 1 RS485, 64 MB SDRAM, 16 MB Flash (621538-02-7 + 396563-15-5)	396563155-CE	\$1,353	A
15	150 MHz, 2 RS232, 1 RS485, 64 MB SDRAM, 16 MB Flash (621538-01-9 + 396563-16-3)	396563163-CE	\$1,746	A
16	150 MHz, 1 RS232, 1 RS485, 64 MB SDRAM, 16 MB Flash (396879-11-0 + 621538-01-9)	396879110-CE	\$2,069	A
17	150 MHz, 2 RS232, 1 RS485, 64 MB SDRAM, 16 MB Flash (621538-01-9 + 396563163S)	396563163S-CE	\$1,402	A
18	150 MHz, 1 RS232, 1 RS485, 64 MB SDRAM, 16 MB Flash (396879110S + 621538-01-9)	396879110S-CE	\$1,723	A
19	19, CE COMM CPU, 1 ENET, 1 RS232, 1 RS485 (621538-01-9 + 396563-18-0)	396563180-CE	\$975	A

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ControlWave Applications SOFTWARE USER LICENSE

For customer order of 12 Licenses, order a 10 License Dongle and a 2 License Dongle

Order by line Segment Numbers, Line 1: Segment 10 = 10 = \$13,635

Line 2: Segment 10 = 2 = \$3,030

Total List price is \$15,400 subject to Base and Extended discounts

CWAP

(PC 894)

MODEL & SEG	SPEC SHEET	DESCRIPTION	SELECT	LIST PRICE	CAT.
AA		ControlWave Station Manager Licenses	AA		
10	CWMICRO:SM	CW Station Manager Licenses On USB Dongle (Note 1) (Note 2)	00	\$0	A
			01	\$1,515	
			02	\$3,030	
			03	\$4,545	
			04	\$6,060	
			05	\$7,575	
			10	\$13,635	
			15	\$20,452	
			20	\$27,269	
			25	\$28,406	
			30	\$34,087	
			35	\$39,768	
			40	\$45,449	
			45	\$51,130	
50	\$51,942				
BB		CW Application Installer (Note 2) (Note 3)	BB		
20		None +	00	\$0	
		Station Manager Version 3.02 Licensed Installer CD ROM	01	\$0	
		Station Manager 6-Run Licensed Installer CD ROM	02	\$0	
		Station Manager 8-Run/XT-8-Run Licensed Installer CD ROM	03	\$0	
CC		Application Source Options			
30		None	00	\$0	
		Station Manager Version 3.02 Locked Source	01	\$8,216	
		Station Manager XT Version 3.02 Locked Source	02	\$8,216	
		Station Manager Version 4.06 Run Locked Source	03	\$8,216	
		Station Manager Version 4.08 Run Locked Source	04	\$8,216	
		Station Manager XT Version 4.0 Locked Source	05	\$8,216	
Model Number: CWAP - AA - BB - CC					
Note 1: The Dongle provides the number of User Licenses ordered. Each license will enable a single RTU to run the Station Manager application. License can also be restored from the RTU back to the Dongle to allow licensing another RTU.					
Note 2: Both segments, AA and BB (10 and 20), must be specified.					
Note 3: Only one selection can be specified.					

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ControlWave FOUNDATION Fieldbus Interface

The FOUNDATION™ Fieldbus (FF) Interface allows a ControlWave RTU to support bi-directional multi-drop digital communication between FOUNDATION Fieldbus H1 devices over a High-Speed Ethernet (HSE) host network.

FF consists of two separate bus networks. The first is the 31.25KB (H1) bus for multi-drop connection to 2-wire field devices. The second is the 10/100 Mbps Ethernet control network backbone with HSE protocol which passes FF data bi-directionally to a ControlWave or to the AMS™ Suite for integration within the PlantWeb® architecture.

The FF Interface may be a separate standalone chassis for use with any ControlWave family PLC/RTU or it can be connected to, and receive power from, a ControlWave Micro backplane.



CWM-FF

(PC 849)

MODEL & SEG	SPEC SHEET	DESCRIPTION	APPROVAL	SELECT	LIST PRICE	CAT.
A		Packaging		A		
10		None	NA	0	See Note 1	A
		Chassis - Panel mount	UL	1	See Note 1	A
		Chassis - Din rail mount	UL	2	See Note 1	A
B		HSE Processor		B		
20		None	NA	0	See Note 1	A
		FOUNDATION Fieldbus processor	UL	1	See Note 1	A
C		Segment Card Slot 1		C		
30		None	NA	0	See Note 1	A
		FF H1, single segment w/o power conditioner	UL	1	See Note 1	A
		FF H1, single segment with power conditioner	UL	2	See Note 1	A
		FF H1, dual segment w/o power conditioner	UL	3	See Note 1	A
		FF H1, dual segment with power conditioner	UL	4	See Note 1	A
D		Segment Card Slot 2		D		
40		None	UL	0		
		FF H1, single segment w/o power conditioner	UL	1	See Note 1	A
		FF H1, single segment with power conditioner	UL	2	See Note 1	A
		FF H1, dual segment w/o power conditioner	UL	3	See Note 1	A
		FF H1, dual segment with power conditioner	UL	4	See Note 1	A

Model Number: CWM-FF - A - B - C - D

Note 1: For prices consult factory.

ControlWave FOUNDATION Fieldbus Interface Parts

(PC 898/410)

DESCRIPTION	PART NO.	LIST PRICE	CAT.
Field Interface Configuration Software (PC 898)			
Software CD with license	395575-11-7	See Note 1	A
Spare parts (PC 410)			
H1 Segment Carrier	400136-01-5	See Note 1	A
H1 Segment module	396910-01-7	See Note 1	A
Power Conditioner	396911-01-3	See Note 1	A
FUSE (1.5A 5B)	395603-10-2	See Note 1	D1
Foundation Fieldbus Terminator	395757-01-0	See Note 1	D1

Note 1: For prices consult factory.

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ControlWave Express

ControlWave® Express SCADA RTU provides exceptional performance and unique functionality for applications requiring low installation cost, very low power consumption, and space efficiency. ControlWave Express is a fixed I/O RTU with three serial and one optional Ethernet port for a wide range of remote area applications.



CWEXP

(PC 856)

MODEL & SEG	SPEC SHEET	DESCRIPTION	APPROVAL	SELECT	LIST PRICE	CAT
A		Packaging		A		
10	420DS-6C	Basic RTU Panel Mount	UL/ATEX	1	\$0	A
		Basic RTU 35 MM DIN Rail Mount	UL/ATEX	2	\$105	A
B		Certification		B		
20		UL Class I DIV II	UL/ATEX	1	\$0	A
		UL, CE (With Protective Cover) (Note 1)	UL/ATEX/CE	2	\$53	A
C D		Processor (CPU board has 2 P/DI & 3 serial ports)		C D		
30		Advanced CPU with gas calculations				
		Ultra low power CPU (5-18V, Solar reg, AUX Out & RTD interface, 14 MHz)	UL/ATEX	A5	\$2,133	A
		Low power CPU without Ethernet (9-28V, Solar Regulator, Aux Out, 33 MHz)	UL/ATEX	A6	\$2,005	A
		CPU with Ethernet (9-28V, Ethernet, 33 MHz, No Solar Regulator or Aux Out)	UL/ATEX	A8	\$2,219	A
		Ultra low power CPU (5-18V, Solar reg, AUX Out & RTD interface, 14 MHz) (CE Approved)	UL/ATEX	B5	\$2,133	A
		Low power CPU without Ethernet (9-28V, Solar Regulator, Aux Out, 33 MHz) (CE Approved)	UL/ATEX	B6	\$2,005	A
		CPU with Ethernet (9-28V, Ethernet, 33 MHz, No Solar Regulator or Aux Out) (CE Approved)	UL/ATEX	B8	\$2,219	A
		Standard CPU without gas calculations				
		Ultra low power CPU (5-18V, Solar reg, AUX Out & RTD interface, 14 MHz)	UL/ATEX	S5	\$1,442	A
		Low power CPU without Ethernet (9-28V, Solar Regulator, Aux Out, 33 MHz) (Non CE Approved)	UL/ATEX	S6	\$1,315	A
		CPU with Ethernet (9-28V, Ethernet, 33 MHz, No Solar Regulator or Aux Out) (Non CE Approved)	UL/ATEX	S8	\$1,526	A
		Ultra low power CPU (5-18V, Solar reg, AUX Out & RTD interface, 14 MHz) (For CE Approval)	UL/ATEX	S5	\$1,442	A
		Low power CPU without Ethernet (9-28V, Solar Regulator, Aux Out, 33 MHz) (For CE Approval)	UL/ATEX	S6	\$1,315	A
		CPU with Ethernet (9-28V, Ethernet, 33 MHz, No Solar Regulator or Aux Out) (For CE Approval)	UL/ATEX	S8	\$1,526	A

Model Number: CWEXP- A - B - C D - E - F G - H - I

Note 1: 9-pin 'D' connector for Comm port 1 cannot have a connector hood. Use (P/N 392843-03-0 \$104) for cable without

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ControlWave Express (Cont.)

CWEXP

(PC 856)

MODEL & SEG	SPEC SHEET	DESCRIPTION	APPROVAL	SELECT	LIST PRICE	CAT.
E		I/O Options		E		
40		None	UL/ATEX	0	\$0	A
		2 PI/DI on Base CPU Base + 2 DI/DO, 4 DI, 2 DO, 2 HSC	UL/ATEX	4	\$298	A
		2 PI/DI on Base CPU Base + 2 DI/DO, 4 DI, 2 DO, 2 HSC, 3 AI	UL/ATEX	5	\$639	A
		2 PI/DI on Base CPU Base + 2 DI/DO, 4 DI, 2 DO, 2 HSC, 3 AI, 1 AO	UL/ATEX	6	\$887	A
F.G		Application Program		F.G		
50		No application program	N/A	00	\$0	A
H		Conformal Coating		H		
50		With	N/A	1	\$294	A
J		Display (Keypad buttons)		J		
70	420DS-5L	None	UL	0	\$0	A
		Display - 4 line X 20 character 2 buttons. Also includes 2' display cable	UL	1	\$432	A
		Display/Keypad - 4 line X 20 character 25 button keypad. Also includes 2' cable	UL	2	\$606	A

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ControlWave Express Spare Parts

(PC 851)

DESCRIPTION	PART NO.	LIST PRICE	CAT.
Fuse	395603-07-2	\$4	D1
Battery	395620-01-5	\$24	D1
DIN rail mounting kit	621583014-Kit	\$92	D1
I/O terminal cover	621590010-Kit	\$54	D1
LED board	400098-01-6	\$45	D1
Boot PROM for all 14 MHz CPUs	Call Watertown		
Boot PROM for all 33 MHz CPUs	Call Watertown		
PROM Extraction tool	395548-01-2	\$8	D1
3 pin terminal block	395711-01-0	\$15	D1
4 pin terminal block	395710-03-0	\$15	D1
5 pin terminal block	395710-04-9	\$23	D1
6 pin power terminal block	395710-07-3	\$23	D1
8 pin terminal block	395710-05-7	\$23	D1
9 pin terminal block	395710-06-5	\$23	D1
PC Cable-10 Foot; 9-pin Female-to-Circular, Alden Connector	395402-01-8	\$180	D1
PC Cable-25 Foot; 9-pin Female-to-Circular, Alden Connector	395402-02-6	\$198	D1

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ControlWave ExpressPAC

ControlWave® ExpressPAC is a pre-packaged SCADA RTU providing exceptional performance and unique functionality for applications requiring low installation cost, very low power consumption, and space efficiency. ControlWave Express is a fixed I/O RTU with three serial and one optional Ethernet port for a wide range of remote area applications. The enclosure supports a wide range of wired and wireless communication, display, solar and battery backup options.



CWEPAC

(PC 859)

MODEL & SEG	SPEC SHEET	DESCRIPTION	APPROVAL	SELECT	LIST PRICE	CAT.
A		Integral Enclosure and LCD/Keypad		A		
10		7½" x 11¼" Lexan with LCD display only, no Keypad	UL	1	\$852	A
		7½" x 11¼" Lexan, LCD, 2 Keys	UL	2	\$1,193	A
		7½" x 11¼" Lexan, LCD, 25 Keys	UL	3	\$1,363	A
		7½" x 11¼" Lexan, LCD, No Display	UL	4	\$663	A
B		Power System (Note 1)		B		
20		None - External Power Source is Necessary	UL	1	\$0	A
		7.2 V Lithium Battery, Single	UL	2	\$256	A
		7.2 V Lithium Battery, Dual	UL	3	\$445	A
		6 V, 7 AH Lead Acid Cell Battery and 6 V, 1 W Solar Panel System	UL	4	\$211	A
		6 V, 7 AH Lead Acid Cell Battery and 6 V, 4.3W Solar Panel System	UL	5	\$385	A
		12 V, 7 AH Lead Acid Cell Battery and 12 V, 4.5 W Solar Panel System	UL	6	\$400	A
C D		Processor (CPU board has 2 PDI & 3 serial ports)		C D		
30		Advanced CPU with gas calculations				
		Ultra low power CPU (5-18V, Solar reg, AUX Out & RTD interface, 14 MHz)	UL	A5	\$2,130	A
		Low power CPU without Ethernet (9-28V, Solar Regulator, Aux Out, 33 MHz)	UL	A6	\$2,003	A
		CPU with Ethernet (9-28V, Ethernet, 33 MHz, No Solar Regulator or Aux Out)	UL	A8	\$2,217	A
		Standard CPU without gas calculations				
		Ultra low power CPU (5-18V, Solar reg, AUX Out & RTD interface, 14 MHz)	UL	S5	\$1,440	A
		Low power CPU without Ethernet (9-28V, Solar regulator, Aux Out, 33 MHz)	UL	S6	\$1,313	A
		CPU with Ethernet (9-28V, Ethernet, 33 MHz, No Solar Regulator or Aux Out)	UL	S8	\$1,525	A
Model Number: CWEPAC - A - B - C D - E - F - G H - J - K - L M N						
Note 1: Power System Selections 2, 3, 4, & 5 can only use 5 - 18 V CPUs A1 & S1.						

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ControlWave ExpressPAC (Cont.)

CWEPAC

(PC 859)

MODEL & SEG	SPEC SHEET	DESCRIPTION	APPROVAL	SELECT	LIST PRICE	CAT.
E		I/O Configuration		E		
40		No I/O module - Base CPU 2 DI / PI Only	UL	0	\$0	A
		2 PI/DI on Base CPU + 2 DI/DO, 4 DI, 2 DO, 2 HSC	UL	4	\$297	A
		2 PI/DI on Base CPU + 2 DI/DO, 4 DI, 2 DO, 2 HSC, 3 AI	UL	5	\$638	A
		2 PI/DI on Base CPU + 2 DI/DO, 4 DI, 2 DO, 2 HSC, 3 AI, 1 AO	UL	6	\$886	A
F		Mounting		F		
50		Pole mount (pipe clamp and brackets)	UL	1	\$63	A
		Panel mount (with 4 fastening ears)	UL	2	\$15	A
G H		Application Program		G H		
60		None	UL	00	\$0	A
J		Hazardous Area Certification		J		
70		None	UL	0	\$0	A
		Class I, Division 2 Non-incendive (UL/CUL - NI)	UL	1	\$0	A
K		Radio Cable/Mounting Hardware and Polyphaser Option		K		
80		No Radio	UL	0	\$0	A
		Without Polyphaser - MDS radio cable mntng (Note 1)	UL	3	\$0	A
		Without Polyphaser - Transnet radio cable mntng (Note 1)	UL	4	\$0	A
		Without Polyphaser - FreeWave radio cable mntng (Note 1)	UL	5	\$0	A
		With Polyphaser - MDS radio cable mntng (Note 1)	UL	6	\$174	A
		With Polyphaser - Transnet radio cable mntng (Note 1)	UL	7	\$174	A
		With Polyphaser - FreeWave radio cable mntng (Note 1)	UL	8	\$174	A
L M N		Radio or Modem Option		L M N		
90		None	UL	000	\$0	A
		Dial-line Modem (Cermatek)	UL	001	\$1,041	A
		1200 Baud leased line modem	UL	002	\$969	A
		Standard FreeWave Radio	UL	103	\$1,460	A
		Standard FreeWave Radio Ready	UL	104	\$160	A
		Standard MDS Transnet Radio	UL	201	\$2,066	A
		Standard Transnet Radio Ready	UL	202	\$160	A
		Standard MDS 9810 Radio with Diag	UL	301	Contact Factory	A
		Standard MDS 4710A Radio with Diag	UL	310	Contact Factory	A
		Standard MDS 4710B Radio with Diag	UL	311	Contact Factory	A
		Standard MDS 9710A Radio with Diag	UL	320	Contact Factory	A
		Standard MDS 9710B Radio with Diag	UL	321	Contact Factory	A
		Standard MDS 4710 A/B, 9710 A/B, 9810 Radio Ready	UL	322	Contact Factory	A
		Standard MDS EntraNet Radio Ready	UL	404	\$160	A
		Standard MDS iNet 900 Radio Ready	UL	423	\$160	A

Model Number: CWEPAC - A - B - C D - E - F - G H - J - K - L M N

Note 1: All radios are located on the Radio Bracket in the ExpressPAC enclosure.

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CW_10, CW_30, CW_35 & CW_31 Upgrade/Exchange

(PC 891)

DESCRIPTION	PART NO.	PRICE	CAT.
CW_10 Upgrade/Exchange Kit (Note: 1)			
CW_10 Upgrade kit - 12 Vdc includes CPU & MFIB	396807-01-1-EXCH	\$5,193	A
CW_10 Upgrade kit - 24 Vdc includes CPU & MFIB	396807-02-0-EXCH	\$5,193	A
CPU Credit - credit issued upon return of 3310 CPU	3310CPU-CREDIT	(\$477)	
MFIB Credit - credit issued upon return of 3310 MFIB	3310MFIB-CREDIT	(\$477)	
CW_30 CPU Upgrade/Exchange Kit (Note: 1 & 2)			
CW_30 CPU, 2 serial, without Ethernet	396807-03-8-EXCH	\$4,327	A
CW_30 CPU, 2 serial, with 1 Ethernet port	396807-04-6-EXCH	\$4,762	A
CW_30 CPU, 2 serial, with 2 Ethernet ports	396807-05-4-EXCH	\$5,193	A
CPU Credit - credit issued upon return of 3330 CPU	3330CPU-CREDIT	(\$798)	
CW_35 CPU Upgrade/Exchange Kit (Note: 1)			
CW_35 CPU, 2 serial, with 2 Ethernet ports	396807-09-7-EXCH	\$5,042	A
CPU Credit - credit issued upon return of 3335 CPU	3335CPU-CREDIT	(\$477)	
CW_31 CPU Upgrade/Exchange Kit (Note: 1)			
CW_31 CPU, 2 serial, with 1 Ethernet ports	396807-10-0-EXCH	\$3,361	A
CPU Credit - credit issued upon return of 3331 CPU	3331CPU-CREDIT	(\$477)	
CW_30 Serial Comm Upgrade/Exchange Kit (Note: 1)			
CW_30 - 2 Port Enhanced Comm Board (3330 only)	396807-06-2-EXCH	\$865	A
CW_30 - 4 Port Enhanced Comm Board (3330 only)	396807-07-0-EXCH	\$1,126	A
Comm Credit - credit issued upon return of 3330 comm card	3330COMM-CREDIT	(\$159)	
CW_35 Serial Comm Upgrade/Exchange Kit (Note: 1)			
CW_35 - 2 Port Enhanced Comm Board (3335 only)	396807-12-7-EXCH	\$840	A
CW_35 - 4 Port Enhanced Comm Board (3335 only)	396807-11-9-EXCH	\$1,092	A
Comm Credit - credit issued upon return of 3335 comm card	3335COMM-CREDIT	(\$159)	
Note 1: Upgrade/Exchange kits require a PO for the full published list price less discount. The customer will be invoiced for this full list, less the discount. Upon return of the old CPU, MFIB, and comm boards, a credit will be issued for Returned Credit Value. Note 2: BIP port cable not included with CW_30 CPU . Order BIP port cable (P/N 621529010-Kit \$91) when upgrading CPU that do not already have the BIP cable. For example 3330 186 (with no BIP ports) or 386 Real Mode CPUs with BIP ports on the CPU. Note 3: Existing 33xx COMMUNICATION CARDS are not compatible with the CW_XX CPUs. COMMUNICATION CARDS must be upgraded with the CW_XX COMMUNICATION CARDS. Note 4: CW_XX CPUs and COMM cards are FM APPROVED for Class 1, Div. 2 Hazardous Installations.			

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REVISION HISTORY

Date	Changes
4-Jan-11	Initial release of Consolidated Price book.
27-Jan-11	Changed CPU from segment 20 to 30 and power supply from segment 30 to 40.
30-Mar-11	Added items on ControlWave PAC: Segment 20 - Part no: CW-B1 (page 1); CW-FF72 to 84 (page 3).
30-Mar-11	Added items on ControlWave Micro: Segment 60 & 70 - Part no: CWM-HH62 to 74 (page 16).
5-Apr-11	Added items on ControlWave Express: Spec Sheet: 420DS-6C in Segment 10 (page 26). added new item - Segment 70: 420DS-5L (page 26).
6-Apr-11	Changed SELECT HI to H on Seg 60 (page 26).
22-Jul-11	Update prices on price pages for October 2011 price increase.
29-Aug-11	Deleted: Part Numbers: BB-16AI2H, BB-8AI2-4AO2-H, BB-16DO2-H, BB8-DI2-8AI2-H, BB-8CNT-U BB-8INS-U, BB-4RTD-4DI2-U, BB-16AI2-M, BB-8AI2-4AO2-M, BB-16DI2-M BB-16DO2-M, BB-8DI2-8DO2-M, BB-8DI2-8AI2-M, BB-8CNT-M, BB-8INS-M BB-4RTD-4DI2-M.
2-Sep-11	Changed Spec: 420DS-5L to CWMICRO-SM Added: Station Manager Application and Station Manager XT Application on SEG 39. Note: 4 on page 12. ControlWave Applications: SOFTWARE USER LICENSE on page 23. Rosemount 1420 Wireless Gateway: 3.6% price increase.
7-Sep-11	Added: Selection to ControlWave FOUNDATION Fieldbus Interface Segment 10, 20 and 30 page 25.
21-Oct-11	Price change - Part numbers: CWM-HH15 - \$1102 to \$1185. CWM-HH28 - \$1220 to \$1303. CWM-HH41 - \$1258 to \$1341. CWM-HH67 - \$1102 to \$1185. CWM-KK15 - \$1102 to \$1185. CWM-KK28 - \$1220 to \$1303. CWM-KK41 - \$1258 to \$1341. CWM-MM15 - \$1102 to \$1185. CWM-MM28 - \$1220 to \$1303. CWM-MM41 - \$1258 to \$1341.
15-Nov-11	Deleted: Power Supplies - Phoenix (PC 493) Part Numbers: V2938581; V2938604; V2938620 Power Supplies - PULS (PC493) - Series Class I, Div 2 approved Spring clamp terminals Part Numbers: VML30102; VML50102; VML100102; VML30100; VML50100; VML100100 Q-Series Class 1, Div2 - Spring clamp terminals Part Numbers: VQS20241 Deleted Part Numbers: VCS3241; VCS5241; VCS10241 Price change - Part numbers: 398036-00-4 - \$651 to \$250 398036-01-2 - \$242 to \$691

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REVISION HISTORY

Date	Changes
20-Jan-12	Deleted Part Numbers: CWM-HH02 and CWM-HH03 (page 12). Added Part Number: 400131-02-1 Mixed I/O Remote Term Fused (6DIO, 4AI, IAO) (page 21). Deleted Note 3: MDS radio is not compatible with Comm module 396581-01-3.
27-Jan-12	Added: Note 1 & Note 2 (page 2); Note 2 (page 13); Note 3 (page 16); Note 2 (page 18). Note 1 (page 3). Price change: Seg 50 - Selection 00 \$0 to \$20. Deleted: Model & Seg E (page 4) P/N: CWREDCPUXCWREDCONF0, CWREDCPUXCWREDCONF1 Added item: Model & Seg D selection 3 & 4 (page 4)- P/N CWREDCPUCWREDCHAS13, CWREDCPUCWREDCHAS14. Model & Seg A selection 4 (page 5) - P/N CWREDCPUCWREDCPU4 Deleted: Model & Seg R (page 6) Price changes: ControlWave PAC Parts and Accessories P/N 396391-01-0 \$59 to \$58 396391-02-8 \$79 to \$78 396885-01-2 \$138 to \$136 396292-01-6 \$82 to \$81 395622-02-6 \$160 to \$159 395622-04-2 \$260 to \$258 395622-00-0 \$237 to \$235 396389-04-0 \$44 to \$43 396389-03-1 \$67 to \$66 Added: Note 4 (page 20). Added items: ControlWave Micro Spares and Accessories P/N 396582-03-6; 395620-01-5.
1-Mar-12	Added item: Seg E 40 selection 1 Conformal Coating (page 5). Seg R 100 selection 1 Conformal Coating (page 6).
6-Jul-12	Added page: ControlWave Ethernet I/O (page 10).
28-Sep-12	Update prices on price pages for October 2012 price increase.
24-Oct-12	Deleted: Rosemount 1420 Wireless Gateway.
18-Mar-12	Added items: ControlWave PAC Seg 20 - Selection 5 & 6 (page 1). Added items: CWREDCPU Seg 10 - Selection 5 & 6 (page 1).
28-Mar-13	Added items: Seg CC 30 CPU Module - Selection 08, 09, 10 & 11 (page 1). Seg CC 30 I/O Expansion Rack CPU - Selection 12 & 13 (page 2). Price change: Seg E 40 CE Approval - Selection 1 - \$72 to \$0 (page 2). Added items: Seg HH & JJ 60 & 70 - Selection 75, 76 & 77 (page 12). Seg C D 30 - Advanced CPU with gas calculations Selection B5, B6 & B8 (page 25). Seg C D 30 - Standard CPU without gas calculations Selection S5, S6 & S8 (page 25). Seg K 80 - Radio Cable - Selection 3, 4, 5, 6, 7 & 8 (page 29). Deleted items: Seg K 80 - Radio Cable - Selection 1 & 2 (page 29). Changed: Note 1 (page 29).
3-Apr-13	Deleted: 33 MHZ CPU Boot PROM (page 22). 150 MHZ CPU Boot PROM (page 22). Boot PROM Extractor (page 22).

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REVISION HISTORY

Date	Changes
31-May-13	Added items: Seg CC 30 CPU Module - selection 11 & 12 (page 11). Seg CC 30 CPU Module - selection 14, 15, 16, 17, 18 & 19 (page 12).
3-Jul-13	Deleted items: ControlWave Seg 20 - selection 5 & 6 (page 1 & 5).
30-Sep-13	Update prices on price pages for October 2013 price increase.
17-Oct-13	Added item: ControlWave Seg 10 - selection 5 (page 5).
28-Oct-13	Update: ControlWave FOUNDATION Fieldbus Interface page - Added: Note 1 (page 25).
5-Nov-13	Deleted items: Seg 60 Conformal Coating on CWEXP (page 27).
8-Nov-13	Update items: Seg 30 CPU Module (Slot #2) Selection: 11 to 10, 12 to 11, 14 to 12, 15 to 13, 16 to 14, 17 to 15, 18 to 16 & 19 to 17 (page 11 & 12).
11-Nov-13	Deleted items: Seg 50 Pump Control Application (page 27). Seg 60 Pump Control Application (page 30).
5-Dec-13	Added items: CWPAC Seg 20 - selection 5 & 6 (page 1). Deleted item: CWREDCPU Seg 10 - selection 5 (page 5).
13-Dec-13	Updated items: CWM Seg 30 CPU Module (Slot #2) Selections: 10 to 11, 11 to 12, 12 to 14, 13 to 15, 14 to 16, 15 to 17, 16 to 18 & 17 to 19 (page 11 & 12).
16-Dec-13	Deleted items: PSSM Selections 1, 3 & 4 SEG 20 CWPAC (page 1). Added: Conformal Coating Seg 60 selection 1 on CWEXP (page 27).
20-Jan-14	Price update: Seg 30 Sel 05 \$1,699 to \$1,714 (page 11). Seg 40 Sel 01 \$561 to \$565 (page 12). Seg 40 Sel 03 \$737 to \$744 (page 12). Seg 60 & 70 Sel 08 \$567 to \$573 (page 14). Seg 60 & 70 Sel 11 \$495 to \$499 (page 14). Seg 60 & 70 Sel 15 \$1259 to \$1,181 (page 14). Seg 60 & 70 Sel 18 \$991 to \$1,001
18-Feb-14	Revalidated: CWM prices (pages 14 to 23).
27-Feb-14	Updated PN's: 396359-01-9-CE-Kit to 396359019-CE-Kit (page 8). 396359-06-0-CE-Kit to 396359060-CE-Kit (page 8). 396359-07-8-CE-Kit to 396359078-CE-Kit (page 8). 396359-05-1-CE-Kit to 396359051-CE-Kit (page 8). 396359-12-4-CE-Kit to 396359124-CE-Kit (page 8). Deleted PN's: 396359-02-7-CE-Kit, 396359-09-4-CE-Kit & 396359-10-8-CE-Kit (page 8). Updated PN's: 621538-02-7-Kit to 621538027-Kit (page 22). 621538-01-9-Kit to 621538019-Kit (page 22). 621538-04-3-Kit to 621538043-Kit (page 22). 621538-03-5-Kit to 621538035-Kit (page 22). 621583-01-4-Kit to 621583014-Kit (page 28). 621590-01-0-Kit to 621590010-Kit (page 28). 621529-01-0-Kit to 621529010-Kit (page 31).
28-Mar-14	Updated Supermarket Items: Seg 10 Sel 2 (page 1). Seg 10 Sel 2 & 3; Seg 20 Sel 2; Seg 30 Sel 05 (page 11). Seg 30 Sel 08 (page 12). Seg 50 Sel 2 (page 13). Seg 60 & 70 Sel 14 (page 14). Seg 60 & 70 Sel 06; Sel 07; Sel 18; Sel 20; Sel 22 (page 14). P/N: 395575-11-7 (page 25).

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REVISION HISTORY

Date	Changes
28-Mar-14	Updated Supermarket items: Seg 50-120 Sel 3, 9 & 12 (page 2).
27-May-14	Updated Embedded Application: Seg 39 Sel 01 & 02 (page 12). Added items: Embedded Application: Seg 39 Sel 03, 04 & 05 (page 12). Updated CWAP: Description Seg 10 (page 25). Added items: CWAP: Seg 20 & Seg 30 (page 25). Added: Note 1, 2 & 3 (page 25).
2-Jul-14	Added items: CWAP Seg 30 Sel 03, 04 & 05 (page 25).
3-Jul-14	Added ATEX approvals: CWM Sel 2, 3 & 5 (page 11). Sel 2 & 5 (page 12). Sel 05 & 77 (page 13). Sel 10 & 22 (page 14). Sel 10 & 22 (page 17). Sel 10 & 22 (page 19).
23-Jul-14	Added ATEX approvals: CWM Seg 30 Sel 15, 07 & 17 (page 12).
15-Aug-14	Updated: CWM Seg 60 & 70 Note 4 (page 13).
18-Aug-14	Deleted: ControlWave Ethernet I/O - Spare and replacement module (page 10).
4-Sep-14	Added: Note 3 (page 1). Note 3 (page 2). CPU Module Options (page 8). Note 6 (page 11). Note 6 (page 12). CPU Module Options (page 24).
9-Sep-14	Price Change: Sel 301 \$2,505 to Contact Factory. Sel 310 \$2,155 to Contact Factory. Sel 311 \$2,155 to Contact Factory. Sel 320 \$2,416 to Contact Factory. Sel 321 \$2,416 to Contact Factory. Sel 322 \$160 to Contact Factory.
10-Sep-14	Added: Note 1 on ControlWave Ethernet I/O (page 10).
16-Sep-14	Changed: PN: 395620-01-5 to W15020X0012 (page 23).
30-Sep-14	Update prices on price pages for October 2014 price increase.
1-Oct-14	Added: Note 6 on CPU Module (Slot #2) (page 11). Note 6 on Micro 150 CPU With Gas Calcs (page 12). Updated Description: Seg 60 & 70 Sel 04 (page 13).
24-Oct-14	Price Update: CWAP - Segment 10 - 10 = \$12,852 to \$13,635 (page 25). Segment 10 - 2 = \$2,856 to \$3,030 (page 25).

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OPENENTERPRISE SCADA SERVER SOFTWARE LICENSE

OpenEnterprise SCADA is the RAS HOST software product to monitor and control RAS RTU's and flow computers. It is designed to operate on a Microsoft Windows™ environment in a simplex or redundant configuration.

OESL

(PC857)

MODEL & SEG	SPEC SHEET	DESCRIPTION	APPROVAL	SELECT	LIST PRICE	CAT.
A		OpenEnterprise SCADA Server				
10		OE Server - Stand Alone (Note 1, Note 2, Note 3)				
		Server already exists.	N/A	0	\$0	A
		RAS Device drivers (BSAP,ROC),Communications management, Real time and Historical data storage, Data server for HMI's, redundancy support.	N/A	1	\$24,003	A
B		OE Server Standby				
20		None	N/A	0	\$0	A
		Hot standby OE Server - requires segment 10	N/A	1	\$20,066	A
C		OpenEnterprise Communications				
30		OE OPC Client RDI				
		None	N/A	0	\$0	A
		Permits OpenEnterprise Server to collect data from a 3rd Party OPC DA 2.05 Server.	N/A	1	\$2,242	A
D		OpenEnterprise Server Utilities				
40		OE Report Suite				
		None	N/A	0	\$0	A
		Report template develop, publish and distribute kit. Includes Excel Plugin & the report scheduler/config tool.	N/A	1	\$10,401	A
E		OE Messaging				
50		None	N/A	0	\$0	A
		OE Alarm paging and email alerts.	N/A	1	\$2,247	A
<p>Note 1: Includes entitlement to OE upgrades and product support for the 1 year duration from time of purchase (Receipt of purchase order). Refer to support contract for definition of the scope of support and the terms and conditions (OE Product support contract VAPR2011).</p> <p>Note 2: 30 Day license included with Media with a restriction of 26 tags on the displays. Online registration required for full license activation.</p> <p>Note 3: OE Server segment is dispatched with an OE install media (DVD).</p>						

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OPENENTERPRISE SCADA CLIENT SOFTWARE LICENSE

The workstation components of OpenEnterprise includes the Thick client side licenses for the HMI functionality.

OECL (857)

MODEL & SEG	SPEC SHEET	DESCRIPTION	APPROVAL	SELECT	LIST PRICE	CAT.
A		OE Workstation Thick clients				
10		OE Graphics Black Dongle (Note 4)				
		None	N/A	0	\$0	A
		Operator Workstation license - Quantity 1	N/A	1	\$4,500	A
		Operator Workstation license - Quantity 5	N/A	5	\$20,000	A
		Operator Workstation license - Quantity 10	N/A	10	\$35,000	A
B		OE Terminal Clients (Note 1, 2,3,5)				
20		None	N/A	0	\$0	A
		5 Concurrent Users	N/A	5	\$15,000	A
		10 Concurrent Users	N/A	10	\$24,000	A
		15 Concurrent Users	N/A	15	\$31,500	A
		20 Concurrent Users	N/A	20	\$36,000	A
		25 Concurrent Users	N/A	25	\$37,500	A

Note 1: Quantities accepted is 5 to max 25 per key. One key ordered per model string.

Note 2: OETS minimum licenses per key = 5

Note 3: Each OpenEnterprise Terminal Services license requires a single Microsoft Terminal Services CAL.

Note 4: OpenEnterprise workstations will have 30 day trial period on initial install.

Note 5: Concurrent User licenses are RDP clients. As such if you open 2 OE desktops for dual monitors it will consume 2 RDP clients.

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OPENENTERPRISE SCADA PARTS

OE Parts to support Upgrade and legacy systems.

DESCRIPTION	PART NO.	LIST PRICE	CAT.
OE Graphics Unactivated Black Dongle (Note 1)			
Unlicensed dongle for upgrade or replacement	395065-00-3	\$405	
Note 1: For use ONLY with OE 2.82 and later (Graphworx 9.2 or earlier). Used in upgrade process from Blue dongle.			

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OPENENTERPRISE SCADA SERVER UPGRADE PLAN

The Upgrade Plan is available to customers who require the latest release of OpenEnterprise software and ARE NOT covered by

1. First year cover from initial purchase of the license.

2. Annual support plan.

The Upgrade plan provides customers the following services:

1. Entitlement of the latest major release of OpenEnterprise for the calendar year of the upgrade.

2. Product information telephone support, during office hours, for Open Enterprise for the calendar year of the upgrade.

3. Customer is entitled to enroll into the Customer Annual Support Plan at the calendar expiry of the Upgrade plan.

Note 1: Upgrades must be applied to all components, partial upgrades will not be allowed and will invalidate the support.

Note 2: The Upgrade plan does not include for any engineering time to implement upgrades. This can be quoted separately.

Note 3: Product support and access to upgrade media commences on receipt and approval of purchase order.

Note 4: The option to take up a support contract is available on completion of the upgrade contract (1 year after purchase). This must occur within 4 weeks of expiry or an upgrade charge will apply.

Note 5: Refer to support contract for definition of the scope of support and the terms and conditions (OE Product support contract VAPR2011).

OpenEnterprise SCADA is the RAS HOST software product to monitor and control RAS RTU's and flow computers. It is designed to operate on a Microsoft Windows™ environment in a standalone or redundant configuration.

OESS

(PC 857)

MODEL & SEG	SPEC SHEET	DESCRIPTION	APPROVAL	SELECT	LIST PRICE	CAT.
A		OpenEnterprise SCADA Server				
10		OE Server - Stand Alone (Note 1, Note 2, Note 3)				
		Server already exists.	N/A	0	\$0	A
		RAS Device drivers (BSAP,ROC), Communications management, Real time and Historical data storage, Data server for HMI's, redundancy support. Includes OpenBSI Upgrade.	N/A	1	\$19,202	A
B		OE Server Standby				
20		None	N/A	0	\$0	A
		Hot standby OE Server - requires segment 10	N/A	1	\$16,009	A
C		OpenEnterprise Communications				
30		OE OPC Client RDI				
		None	N/A	0	\$0	A
		Permits OpenEnterprise Server to collect data from a 3rd Party OPC DA 2.05 Server.	N/A	1	\$1,793	A
D		OpenEnterprise Server Utilities				
40		OE Report Suite				
		None	N/A	0	\$0	A
		Report template develop, publish and distribute kit. Includes Excel Plugin & the report scheduler/config tool.	N/A	1	\$8,321	A
E		OE Messaging				
50		None	N/A	0	\$0	A
		OE Alarm paging and email alerts.	N/A	1	\$1,797	A

Note 1: Includes entitlement to OE upgrades and product support for the 1 year duration from time of purchase (Receipt of purchase order).

Refer to support contract for definition of the scope of support and the terms and conditions (OE Product support contract VAPR2011).

Note 2: 30 Day license included with Media with a restriction of 26 tags on the displays. Online registration required for full license activation.

Note 3: OE Server segment is dispatched with an OE install media (DVD).

OPENENTERPRISE SCADA CLIENT UPGRADE PLAN

The work station components of OpenEnterprise includes the Thick client side licenses for the HMI functionality.

OECS

(PC 857)

MODEL & SEG	SPEC SHEET	DESCRIPTION	APPROVAL	SELECT	LIST PRICE	CAT.
A		OE Workstation Thick clients				
10		OE Graphics Black Dongle (Note 1, Note 5)				
		Workstation license	N/A	1	\$6,232	A
		Workstation license	N/A	2	\$12,464	A
		Workstation license	N/A	3	\$18,697	A
		Workstation license	N/A	4	\$24,929	A
		Workstation license	N/A	5	\$31,161	A
		Workstation license	N/A	6	\$37,393	A
		Workstation license	N/A	7	\$43,625	A
		Workstation license	N/A	8	\$49,858	A
		Workstation license	N/A	9	\$56,090	A
		Workstation license	N/A	10	\$62,322	A
B		OE Terminal Clients (Note 2,3,4)				
20		5 Concurrent Users	N/A	5	\$19,351	A
		6 Concurrent Users	N/A	6	\$20,667	A
		7 Concurrent Users	N/A	7	\$24,112	A
		8 Concurrent Users	N/A	8	\$27,556	A
		10 Concurrent Users	N/A	10	\$30,188	A
		15 Concurrent Users	N/A	15	\$45,282	A
		20 Concurrent Users	N/A	20	\$60,376	A
		25 Concurrent Users	N/A	25	\$75,470	A

Note 1: For use ONLY with OE 2.82 and later (Graphworx 8.1 to 9.2).

Note 2: Quantities accepted is 5 to max 25 per key. One key ordered per model string.

Note 3: OETS minimum licenses per key = 5

Note 4: Each OpenEnterprise Terminal Services license requires a single Microsoft Terminal Services CAL.

Note 5: OpenEnterprise workstations will have 30 day trial period on initial install. This is restricted to 26 viewable tags.

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REVISION HISTORY

Date	Changes
1-Oct-11	Initial release of Consolidated Price book.
28-Sep-12	Update prices on price pages for October 2012 price increase.
30-Sep-13	Update prices on price pages for October 2013 price increase.
15-Nov-13	Deleted items: Seg 60 OE WebToolkit Server (page 1). Seg 70 OE WebToolkit Server Connections (page 1). Seg 60 OE WebToolkit Server (page 4). Seg 70 OE WebToolkit Server Connections (page 5).
31-May-14	Updated: OECL (page 2). OpenEnterprise SCADA Parts (page 3).
21-Jul-14	Added item: OECL Sel 0 None on Seg 10 & 20 (page 2).
30-Sep-14	Update prices on price pages for October 2014 price increase.

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OPENBSI UTILITIES SOFTWARE USER LICENSE

OpenBSI is a range of software products for Microsoft Windows™ that provides access to the entire range of Bristol ControlWave and 33xx products. It includes options for communications drivers, diagnostic, data collection tools and OPC & ODBC interfaces.

OpenBSILIC

(PC 898)

MODEL & SEG	SPEC SHEET	DESCRIPTION	APPROVAL	SELECT	LIST PRICE	CAT.
10		OpenBSI Utilities CD (Note 6)	N/A		\$36	A
160		Hardware Dongle License (Note 7)				
		USB Dongle for portable license. (Software license via web site registration if segment 160 not ordered)	N/A		\$206	A
A		Programming Software		A		
30		ACCOL Workbench				
		Compiles both Real & Protected Mode loads	N/A		\$2,500	A
40		ControlWave Designer with ACCOL III				
		ControlWave programming with ACCOL III Function Block Library	N/A		\$4,139	A

Note 1: Includes automatic upgrades for 1 year.

Note 2: OpenBSILIC pricing should be quoted to all customers whose contract has lapsed for a period greater than 2 years.

Note 3: The User License provides single PC system licensing up to the number specified. Enter the quantity for each segment and apply appropriate discount below. Segments with different quantities may have different discount calculations.

Qty	Discount	Qty	Discount	Qty	Discount	Qty	Discount
2 - 10	20%	11-20	30%	21-30	40%	31 + up	50%

Note 4: Multi-user discounts not available to ASPs.

Note 5: Order by line Segment Numbers, Example Line 1: Segment 20 = 03; \$3195 less 20% = \$2556

List only the segments numbers to be ordered, Example Line 2: Segment 80 = 03; \$2028 less 20% = \$1622.4

Note 6: Please note that software media CD will only be issued with orders for software. Orders for CD media only will not be accepted.

Note 7: Object Server and Web Toolkit cannot be licensed on a Dongle. They are software licenses only.

Note 8: This is the Quantity of I/O points supported by the Virtual ControlWave license above.

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OPENBSI UTILITIES SOFTWARE USER LICENSE (Cont.)

OpenBSILIC

(PC 898)

MODEL & SEG	SPEC SHEET	DESCRIPTION	APPROVAL	SELECT	LIST PRICE	CAT.
B		OpenBSI Networking Software		B		
		OpenBSI Network Edition				
20		Includes all Basic OpenBSI Utilities for network setup, configuration, calibration, data viewing, file downloading & diagnostics.	N/A		\$1,632	A
80		Harvester				
		Historical Data Collection Tools	N/A		\$1,036	A
90		Security Vision				
		Security Vision utility. Requires ControlWave Designer application function block P/N	N/A		\$1,164	A
C		Communication Interfaces		C		
60		OPC Server				
		None	N/A		\$0	
110		Object Server (Not available on Dongle)				
		Communications manager for OPC Server(s) supporting ControlWave and NW3000 products	N/A		\$860	A
		Object Server OPC Interface (Requires Object Server purchase above) (Note 6)				
		1 OPC Server Licenses (to connect to Object Server)	N/A	001	\$860	A
		5 OPC Server Licenses (to connect to Object Server)	N/A	002	\$3,450	A
		10 OPC Server Licenses (to connect to Object Server)	N/A	003	\$6,899	A
		20 OPC Server Licenses (to connect to Object Server)	N/A	004	\$12,072	A
		50 OPC Server Licenses (to connect to Object Server)	N/A	005	\$25,870	A
		Unlimited Client license	N/A	006	\$51,738	A

Note 1: Includes automatic upgrades for 1 year.

Note 2: OpenBSILIC pricing should be quoted to all customers whose contract has lapsed for a period greater than 2 years.

Note 3: The User License provides single PC system licensing up to the number specified. Enter the quantity for each segment and apply appropriate discount below. Segments with different quantities may have different discount calculations.

Qty	Discount	Qty	Discount	Qty	Discount	Qty	Discount
2 - 10	20%	11-20	30%	21-30	40%	31 + up	50%

Note 4: Multi-user discounts not available to ASPs.

Note 5: Order by line Segment Numbers, Example Line 1: Segment 20 = 03; \$3195 less 20% = \$2556
List only the segments numbers to be ordered, Example Line 2: Segment 80 = 03; \$2028 less 20% = \$1622.4

Note 6: Individual OPC SERVERS (DA, Alarm & Event) can be purchased to connect locally or remotely to the Object Server - Communications manager.

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OPENBSI UTILITIES SOFTWARE USER LICENSE (Cont.)

OpenBSILIC

(PC 898)

MODEL & SEG	SPEC SHEET	DESCRIPTION	APPROVAL	SELECT	LIST PRICE	CAT.
D		Object Server and OE Utility options		D		
130		Alarm Paging (not available yet) (Not available on Dongle)				
		Requires Object Server or OE	N/A	0		A
140		Web Toolkit Server (Requires Object Server purchase above or OE)				
		Requires Object Server or OE (Not available on Dongle)	N/A	001	\$3,770	A
		Web Toolkit Connection (Note 6)				
		1 Client license	N/A	001	\$860	A
		5 Client licenses	N/A	002	\$3,450	A
		10 Client licenses	N/A	003	\$6,899	A
		20 Client licenses	N/A	004	\$12,072	A
		50 Client licenses	N/A	005	\$25,870	A
		Unlimited Client licenses	N/A	006	\$51,738	A

Note 1: Includes automatic upgrades for 1 year.

Note 2: OpenBSILIC pricing should be quoted to all customers whose contract has lapsed for a period greater than 2 years.

Note 3: The User License provides single PC system licensing up to the number specified. Enter the quantity for each segment and apply appropriate discount below. Segments with different quantities may have different discount calculations.

Qty	Discount	Qty	Discount	Qty	Discount	Qty	Discount
2 - 10	20%	11-20	30%	21-30	40%	31 + up	50%

Note 4: Multi-user discounts not available to ASPs.

Note 5: Order by line Segment Numbers, Example Line 1: Segment 20 = 03; \$3195 less 20% = \$2556

List only the segments numbers to be ordered, Example Line 2: Segment 80 = 03; \$2028 less 20% = \$1622.4

Note 6: This is the Quantity of I/O points supported by the Virtual ControlWave license above.

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OPENBSI UTILITIES SOFTWARE UPGRADE PLANS

OpenBSI is a range of software products for Microsoft Windows™ that provides access to the entire range of Bristol ControlWave and 33xx products. It includes options for communications drivers, diagnostic, data collection tools and OPC & ODBC interfaces.

OpenBSISS

(PC 899)

MODEL & SEG	SPEC SHEET	DESCRIPTION	APPROVAL	SELECT	LIST PRICE	CAT.
10		OpenBSI Utilities CD (Note 6)	N/A		\$0	A
A		Programming Software		A		
30		ACCOL Workbench				
		Compiles both Real & Protected Mode loads	N/A		\$999	A
40		ControlWave Designer with ACCOL III (Note 1)				
		ControlWave programming with ACCOL III Function Block Library	N/A		\$1,654	A
170		Virtual ControlWave for OpenEnterprise (Not yet available)				
		Number of Licenses (Number of PCs licensed for Virtual ControlWave)	N/A		\$631	A
180		Virtual ControlWave I/O Count per Virtual ControlWave License (Note 7) (Requires OpenEnterprise Server) (Not yet available)				
		2000 I/O points	N/A	001	\$948	A
		5000 I/O points	N/A	002	\$1,893	A
		Unlimited I/O points	N/A	003	\$3,158	A

Note 1: Includes automatic upgrades for 1 year.

Note 2: OpenBSISS pricing should only be quoted to customers whose support contract has lapsed for a period of 2 years or less.

Note 3: The User License provides single PC system licensing up to the number specified. Enter the quantity for each segment and apply appropriate discount below. Segments with different quantities may have different discount calculations.

Qty	Discount	Qty	Discount	Qty	Discount	Qty	Discount
2 - 10	20%	11-20	30%	21-30	40%	31 + up	50%

Note 4: Multi-user discounts not available to ASPs.

Note 5: Order by line Segment Numbers, Example Line 1: Segment 20 = 03; \$1317 less 20% = \$1053.6

List only the segments numbers to be ordered, Example Line 2: Segment 80 = 03; \$813 less 20% = \$650.4

Note 6: Order for software media CDs can only be accepted on the OPENBSILIC price book page. Orders for CDs from this price book page will not be accepted.

Note 7: This is the Quantity of I/O points supported by the Virtual ControlWave license above.

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OPENBSI UTILITIES SOFTWARE UPGRADE PLANS (Cont.)

OpenBSISS

(PC 899)

MODEL & SEG	SPEC SHEET	DESCRIPTION	APPROVAL	SELECT	LIST PRICE	CAT.
B		OpenBSI Networking Software		B		
		OpenBSI Network Edition				
20		Includes all Basic OpenBSI Utilities for network setup, configuration, calibration, data viewing, file downloading & diagnostics.	N/A		\$673	A
80		Harvester				
		Historical Data Collection Tools	N/A		\$415	A
90		Security Vision				
		Security Vision utility. Requires ControlWave Designer application function block P/N	N/A		\$466	A
C		Communication Interfaces		C		
		Object Server (Not available on Dongle)				
110		Communications manager for OPC Server(s) supporting ControlWave and NW3000 products	N/A		\$345	A
		Object Server OPC Interface (Requires Object Server purchase above) (Note 6)				
		1 OPC Server License (to connect to Object Server)	N/A	001	\$345	A
		5 OPC Server Licenses (to connect to Object Server)	N/A	002	\$1,378	A
		10 OPC Server Licenses (to connect to Object Server)	N/A	003	\$2,757	A
		20 OPC Server Licenses (to connect to Object Server)	N/A	004	\$4,829	A
		50 OPC Server Licenses (to connect to Object Server)	N/A	005	\$10,349	A
		Unlimited Client licenses	N/A	006	\$20,696	A

Note 1: Includes automatic upgrades for 1 year.

Note 2: OpenBSISS pricing should only be quoted to customers whose support contract has lapsed for a period of 2 years or less.

Note 3: The User License provides single PC system licensing up to the number specified. Enter the quantity for each segment and apply appropriate discount below. Segments with different quantities may have different discount calculations.

Qty	Discount	Qty	Discount	Qty	Discount	Qty	Discount
2 - 10	20%	11-20	30%	21-30	40%	31 + up	50%

Note 4: Multi-user discounts not available to ASPs.

Note 5: Order by line Segment Numbers, Example Line 1: Segment 20 = 03; \$1317 less 20% = \$1053.6
List only the segments numbers to be ordered, Example Line 2: Segment 80 = 03; \$813 less 20% = \$650.4

Note 6: Individual OPC SERVERS (DA, Alarm & Event) can be purchased to connect locally or remotely to the Object Server - Communications manager.

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OPENBSI UTILITIES SOFTWARE UPGRADE PLANS (Cont.)

OpenBSISS

(PC 899)

MODEL & SEG	SPEC SHEET	DESCRIPTION	APPROVAL	SELECT	LIST PRICE	CAT.
D		Object Server and OE Utility options		D		
130		Alarm Paging (not available yet)				
		Requires Object Server or OE	N/A	0		A
140		Web Toolkit Server (Requires Object Server purchase above or OE)				
		Requires Object Server or OE	N/A		\$1,552	A
		Web Toolkit Connection (Note 6)				
150		1 Client license	N/A	001	\$345	A
		5 Client licenses	N/A	002	\$1,378	A
		10 Client licenses	N/A	003	\$2,757	A
		20 Client licenses	N/A	004	\$4,829	A
		50 Client licenses	N/A	005	\$10,349	A
		Unlimited Client licenses	N/A	006	\$20,696	A

Note 1: Includes automatic upgrades for 1 year.

Note 2: OpenBSISS pricing should only be quoted to customers whose support contract has lapsed for a period of 2 years or less.

Note 3: The User License provides single PC system licensing up to the number specified. Enter the quantity for each segment and apply appropriate discount below. Segments with different quantities may have different discount calculations.

Qty	Discount	Qty	Discount	Qty	Discount	Qty	Discount
2 - 10	20%	11-20	30%	21-30	40%	31 + up	50%

Note 4: Multi-user discounts not available to ASPs.

Note 5: Order by line Segment Numbers, Example Line 1: Segment 20 = 03; \$1317 less 20% = \$1053.6

List only the segments numbers to be ordered, Example Line 2: Segment 80 = 03; \$813 less 20% = \$650.4

Note 6: This is the Quantity of I/O points supported by the Virtual ControlWave license above.

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REVISION HISTORY

Date	Changes
4-Jan-11	Initial release of Consolidated Price book.
25-Jan-11	Page 2 SEG 60 - changed OPC Data, Alarm & Event Server to None - This OPC Server is no longer available. Use Object Server. OPC Server price changed from \$2,281 to \$0.
31-May-11	Price change on segment 170 \$278 to \$574.
4-Aug-11	Update prices on price pages for October 2011 price increase.
28-Sep-12	Update prices on price pages for October 2012 price increase.
5-Aug-13	Deleted: OpenBSI Utilities USB Dongle - OpenBSIHWD.
30-Sep-13	Update prices on price pages for October 2013 price increase.
15-Nov-13	Deleted: Seg 170 Virtual ControlWave for OpenEnterprise (page 1). Seg 180 Virtual ControlWave I/O Count per Virtual ControlWave License (page 1).
27-Jul-14	Updated Noted 2 : OpenBSILIC (pages 1 to 3). OpenBSISS (pages 4 to 6).
30-Sep-14	Update prices on price pages for October 2014 price increase.

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